

Workbook For Introduction To Computers And Accounting Application



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PREFACE

Most businesses, large or small turn to the computer to process business transactions and to analyze business problems. Understanding the computer-how it works and how it can be used is becoming more essential to be productive and successful in today's work.

This book presents fundamental concepts in a manner that emphasizes their importance from the user's point of view. No previous experience with computers is required for this book.

This book is divided into eleven chapters, Chapter (1) provides an overview on computer systems and their evaluation. Chapter (2) describes the various input devices commonly used by computer users. Chapter (3) focuses on the brain of the computer. Chapter (4) presents a detailed discussion of processing data into information. Chapter (5) explains how data is being represented in the central processing unit secondary storage media and devices are described in. Chapter (6) provides a brief review of the various output devices of a computer system. Chapter (7) discusses Networking

and computer connections. Chapter (8) introduces an in depth discussion of the computer software, the operating system. Chapter (9) provides an introduction to program development stages. Chapter (10) Provides An Idea About Spreadsheets And business graphics. Finally Chapter (11) Provides An Idea About data base management systems.

Concepts, software, and models Overall I hope this book will be judged as a significant new contribution to the teaching and learning of computer essentials and accounting applications.

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Chapter (1)
AN
INTRODUCTION TO
COMPUTERS

Key Words :

Accuracy	دقة
Analog Computers	الحاسبات القياسية (التناظرية)
Application	تطبيق
Arithmetically	حسابياً
Central Processing Unit C.P.U	وحدة التشغيل المركزية
Communication	اتصالات
Convert	يحول
Data	بيانات
Data Base Administrator	مدير قاعدة البيانات
Data Entry	مدخل البيانات
Device	جهاز
Digital Computers	الحاسبات الرقمية
General-purpose computers	حاسبات ذات أغراض عامة
Hardware	الأجزاء الملموسة من الحاسب
Hybrid Computers	الحاسبات المختلطة
Information	معلومات
Instructions	تعليمات
Intangible	غير ملموس
Integrated Circuit	الدوائر المتكاملة
Logically	منطقياً
Mainframe Computers	الحاسبات الكبيرة
Manipulate	يحافظ على
Meaningful	ذو معنى
Memory	ذاكرة

Micro-Computers	الحاسبات الشخصية (الصغيرة)
Microsecond	ميلي ثانية = $1 / 1000.000$ من الثانية
Millisecond	ميلي ثانية = $1 / 1000$ من الثانية
Mini-Computers	الحاسبات المتوسطة
Nanosecond	ميلي ثانية = $1 / 1000.000.000$ من الثانية
Perform	يؤدي
Physical	طبيعة
Pico-second	بيكو ثانية = $1 / 1000.000.000.000$ من الثانية
Process	تشغيل
Programmers	المبرمج
Reliability	موثوقية
Retrieval	استرجاع
Semiconductor	شبه موصل
Software	مجموعة البرامج واجراءات تشغيل الحاسب
Special-purpose computers	حسابات ذات أغراض خاصة
Storage	تخزين
Super Computer	الحاسبات العملاقة
System	نظام
System Analysts	محلل النظم
User Interface	واجهة المستخدم
Vacuum Tube	الصمامات المفرغة

A : Complete the following statements; you do not have to rewrite the whole statement in your answer book you may write the statement's number and missing word (s) : Use the Following Format :

Statement's No	The missing word
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- 1- is data that has been processed into a form that has meaning and is useful.
- 2-The main purpose of a computer system is to data into information.
- 3- The equipment in a computer system is called
- 4- The instructions that tell the computer what to do are called
- 5- The four general operations that all computers perform are,, and
- 6- A computer system is a combination of six elements,,,, and communications
- 7- can be defined as a collection of unorganized facts.

- 8- can be defined as processed data which is useful for decision making.
- 9- The computer hardware consists of input hardware,, and
- 10-People who write computer programs are called
- 11-People who control and manage data and management to oversee the use of the computer are called
- 12-Another name for a microcomputer is
- 13-The term refers to the physical a components of a computer.
- 14- Computer are large multi-user computer that are usually require a special environment including separate air conditioning and electrical power.
- 15-People who plan and design systems of programs are called

The answer:

Statement's No.	The Missing Word(S)
1	Information.
2	Convert.
3	Hardware.
4	Software.
5	Input – Processing – Output – Storage.
6	Hardware, Software, Data-Information, Procedures, People.
7	Data.
8	Information.
9	Processing hardware, Storage hardware, Output hardware, and Communications hardware.
10	Computer programmers.
11	Database administrator.
12	Personal computer.
13	Hardware.
14	Mainframe.
15	System analysts.

B: For each of the following statements, chose the best response. You do not have rewrite the whole statement in your answer book, you may write the statement's number and the best response. Use the following format:

Statement's No	The Best Response
----------------	-------------------

- 1- Computer are capable of performing
 - a- Arithmetic operations only.
 - b- Arithmetic and storage operations only.
 - c- Many different operations depending upon the size of the computer.
 - d- input, arithmetic, logical, output and storage operations.

- 2- Step-by-step instructions that run the computer are.....

a- Hardware.	c- Documents.
b- CPUs.	d- Programs.

- 3- The raw material to be processed by a computer is called.....

a- A program.	c- Data.
b- Software.	d- Information.

- 4- Personal computers are another name for

a- Microcomputer	c- Minicomputers.
b- Data	d- Super computers.

- 5- Another name for programs is
- a- Software
 - b- Data
 - c- Hardware.
 - d- Storage.
- 6- The computer converts raw data into
- a- Documentation
 - b- Application software
 - c- Software.
 - d- Information.
- 7- Another name of memory is
- a- Primary storage.
 - b- Disk.
 - c- Wand.
 - d- Secondary.
- 8- Which is not a professional computer job?
- a- Systems analysts.
 - b- User.
 - c- Data entry operator.
 - d- Programmer.
- 9- Which is not computer classification?
- a- Maxi computer
 - b- Microcomputer
 - c- Minicomputer.
 - d- Mainframe.
- 10- The most powerful computers are
- a- Super minis
 - b- Super computers
 - c- Super micros.
 - d- Super mainframes.
- 11- First- generation computers were characterized by the use of
- a- Microprocessor.
 - b- Transistor.
 - c- Vacuum tube.
 - d- Integrated circuit.
- 12- Silicon chips of integrated circuits marked the advent of the
- a- Second generation.
 - b- Third generation.
 - c- Fourth generation.
 - d- Fifth generation.

- 13- The fourth generation is identified by the**
a- Minicomputer c- Integrated circuits.
b- IBM system /360 d- Microprocessor.
- 14- The focus of the fifth generation is**
a- Connectivity. c- Symbolic languages.
b- Silicon. d- Memory chips.
- 15-A person who plans and designs computer systems is called a**
a- Word processor. c- Systems analyst.
d- Programmer. d- Data entry operator.

The answer :

Statement's No.	The Best Responses	
1	D	Input, arithmetic, logical, output and storage operations.
2	D	Programs.
3	C	Data.
4	A	Microcomputer.
5	A	Software.
6	D	Information.
7	A	Primary storage.
8	B	User.
9	A	Maxi computer.
10	B	Super computers.
11	C	Vacuum tube.
12	B	Third generation.
13	D	Microprocessor.
14	A	Connectivity.
15	C	Systems analysis.

C : Indicate whether each of the following statements is true (T), or false (F), and justify the false ones. You may organize your answer as follows:

Statement's No	T or F	Incorrect Term	Correct Term
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- 1- Arithmetic operations are comparisons of data in the processor to see if -one value is greater than, equal to , or less than another value.
- 2- Another name of memory is secondary storage.
- 3- The most powerful computers are known as super computers.
- 4- Processed data is called information.
- 5- The people who write software are called computer operators.
- 6- The objective of data processing is to convert information into data.
- 7- A computer is an electronic device that can accept and store data, perform arithmetic and logical operations, and produce meaningful output from the processing.
- 8- A program that allows users to enter rows and columns of numbers and perform calculations is called data base software.

- 9- The processor is also called the central processing unit, or CPU.**
- 10- Secondary storage units contain the instructions and data to be used immediately by the processor.**
- 11- Microprocessors led to the development of the personal computers.**
- 12- Data must be manipulated and organized to become information.**
- 13- Data processing system accepts data as output and processing it into information as input.**
- 14- Word processing software is designed to allow a user to create and edit text.**
- 15- Graphics software can be used to make maps and harts.**

The Answer :

Statement's No	T Or F	Incorrect Term	Correct Term
1	F	Arithmetic	Logical
2	F	Secondary	Primary
3	T	--	--
4	T	--	--
5	F	Operators	Programmer
6	F	Information Data	Data Information
7	T	--	--
8	F	Database	Spreadsheet
9	T	--	--
10	F	Secondary storage Unit	Main memory
11	T	--	--
12	T	--	--
13	F	Output -Input	Input- Output
14	T	--	--
15	T	--	--

D: For each of the following statements, chose the best response.

- 1. The central processing unit is an example of ...**
a. software b. hardware
c. a program d. an output unit
- 2. Additional data and programs not being used by the processor are stored in**
a. secondary storage c. input units
b. output units d. the CPU
- 3. Step-by-step instructions that run the computer are**
a. hardware b. CPUs
c. documents d. software
- 4. Desktop and personal computers are also known as ...**
a. microcomputers c. supercomputers
b. mainframes d. peripheral equipment
- 5. The raw material to be processed by a computer is called**
a. a program b. software
c. data d. information
- 6. Printers and screens are common forms of**
a. input units c. output units
b. storage units d. processing unit s
- 7. The unit that transforms data into information is the**
a. CPU c. bar-code reader
b. disk drive d. wand reader

8. An example of peripheral equipment is the
a. CPU b. printer
c. spreadsheet d. microcomputer
9. Another name for memory is
a. secondary storage c. disk storage
b. primary storage d. tape storage
10. Which is not a computer classification?
a. maxi computer c. pen-based computer
b. microcomputer d. mainframe
11. Computer users who are not computer professionals are sometimes called.....
a. librarians c. peripheral users
b. information officers d. end-users
12. The most powerful computers are
a. super PCs c. workstations
b. super mainframes d. supercomputers
13. Raw data is processed by the computer into.....
a. number sheets b. paragraphs
c. updates d. information
14. Another name for programs is...
a. software b. data.
c. hardware d. storage
15. The computer converts raw data into
a. storage b. peripherals
c. communications d. information

16. Another name for memory is....
- a. primary storage
 - b. wand
 - c. Disk.
 - d. secondary storage
17. A computer system that does all its processing in one location is considered.....
- a. decentralized
 - b. distributed
 - c. centralized
 - d. networked
18. The hardware that manipulates input data into processed information is.....
- a. The disk drive
 - b. A screen
 - c. memory
 - d. the CPU
19. The electronic circuitry that temporarily stores data and instructions is called.....
- a. Memory
 - b. A disk drive
 - c. the CPU
 - d. a keyboard
20. Raw material to be processed by the CPU is called
- a. Data.
 - b. Information
 - c. Instructions .
 - d. Programs.

1.	B	8.	B	14.	A
2.	A	9.	B	15.	D
3.	D	10.	A	16.	A
4.	A	11.	D	17.	C
5	C	12.	D	18.	D
6.	C	13.	D	19.	A
7.	A			20.	A

E: Indicate whether each of the following statements is true (T), or false (F):

- 1-The processor is also called the central processing unit, or CPU.**
- 2-Secondary storage units contain the instructions and data to be used immediately by the processor.**
- 3-The most powerful personal computers are known as Supercomputers.**
- 4-Processed data is called information.**
- 5-Secondary storage is another name for memory.**
- 6-These computers are arranged from least powerful to most powerful: microcomputer, mainframe, supercomputer.**
- 7-Another name for memory is secondary storage.**
- 8- Another name for memory is secondary storage.**
- 9- Primary storage is also known as memory**
- 10-Input devices accept processed information and send it to the central processing un**
- 11- The computer and its associated equipment are called peripherals**
- 12- The instructions that tell a computer how to process the data are called programs or software.**

- 13- A computer is a machine that processes raw input into data.**
- 14- Smaller computers do not need a CPU.**
- 15- Output is processed data**
- 16- A computer programmer is a person who writes software.**
- 17- Supercomputers are most likely to be found in small businesses, particularly retail stores**
- 18- The central processing unit has the electronic circuitry that manipulates information into data.**
- 19- Computers fall into one of two classifications: personal computers and mainframes.**
- 20- A centralized computer system does all its processing in one location.**
- 21- Typical computer output devices are computer screens and printers.**
- 22- Processed data is called information.**
- 23- The smallest computers are minicomputers.**
- 24- Data can be held permanently in memory.**
- 25- Data is the raw material to be processed by the computer.**
- 26- The most efficient computer system for a large bank is to have a mainframe computer in each branch office.**
- 27- It is possible for computer hardware components to be in separate rooms or even separate buildings.**
- 28- Secondary storage can hold data only temporarily.**

29 Large computers use both primary and secondary storage but small computers use only primary storage.

1.	T	16.	T
2.	F	17.	F
3.	F	18.	F
4.	T	19.	F
5.	F	20.	T
6.	T	21.	T
7.	F	22.	T
8.	F	23.	F
9.	T	24.	F
10.	F	25.	T
11.	F	26.	F
12.	T	27.	T
13.	F	28.	F
14.	F	29.	F
15.	T		

F: Complete the following statements;

1. The four general components of a computer are
2. After data is input to the system but before it is processed, it is held in
3. The input, output, and secondary storage devices attached to a computer are known as
4. Large computers in the computer industry are called.....
5. The term used for raw material given to a computer for processing is
6. People who purchase and use software are called
7. CPU stands for
8. Another name for a microcomputer is.....
9. The most powerful computers are called
10. A computer and its associated equipment are called...
11. The CPU processes data into

The Answer

- 1. Input unit , processor , output unit, storage unit.**
- 2 memory (or primary storage)**
- 3. Peripheral equipment**
- 4. Mainframes**
- 5. Data**
- 6. Users, or end-users.**
- 7. Central processing unit .**
- 8. Personal computer .**
- 9. Supercomputers.**
- 10. Hardware.**
- 11. Information.**

Chapter (2)

INPUT TO THE COMPUTER

Key Words :

Bar Code	الكود الخطي
Beams	أشعة
Commands	أوامر
Digitizer tablet	اللوحة الرقمية
Dumb	صامت
Interact	يتفاعل
Joystick	عصا التحكم
Keyboard	لوحة المفاتيح
Light pen	القلم المضئ
Magnetic Ink Character Recognition (MICR)	وحدة التعرف الضوئي على الحبر الممغنط
Modem = Modulator- Demodulator	موديم
Mouse	فأرة
Optical Character Recognition (O.C.R)	وحدة التعرف الضوئي على الحروف
Optical Mark Recognition (OMR)	وحدة التعرف الضوئي على العلامات
Point Of Sale (P.O.S)	نقطة البيع
Pointing Devices	أجهزة التآشير
Scanning Devices	أجهزة الماسحات
Signals	إشارات
Smart	ذكي
Smart Cards	البطاقات الذكية
Terminals	طرفيات
Trackball	الكرة الدوارة
Universal Product Code (UPC)	النظام العالمي للأكواد
User Responses	استجابة المستخدم

A : Complete the following statements; you do not have to rewrite the whole statement in your answer book you may write the statement's number and missing word (s) : Use the Following Format :

Statement's No	The Best Response
----------------	-------------------

- 1- An input device that can select input by clicking it is called a (n)
- 2- The device that scans the zebra-stripes on supermarket packages is called a (n)
- 3- The input device that is rolled on a flat surface to produce corresponding cursor movement is the
- 4- Another word for the cursor is the
- 5- An optical recognition input method favored by the banking industry is
- 6- The standard typeface used for optical character recognition is
- 7- The parallel black - and white lines found on products to identify the product is the
- 8- The optical input technology that recognizes marks made on a certain place on paper is called
- 9- Computerized cash registers are called
- 10- Screens that use infrared light beams to identify an input point are called
- 11- input allows the user to speak directly to the application using verbal commands and responses.

- 12- terminal does not perform independent processing, as all the processing takes place in an external processor.
- 13- terminals contain processing capabilities and are sometimes called programmable terminals.
- 14- The is a graphics input device used primarily for video games.
- 15- A screen sensitive to input from a finger contact is called a (n)
- 16- A graphics input device that test you use a special stylus to draw or trace images, which are converted to data that can be processed by the computer is a (n)
- 17- A graphics input device that when it makes contact with the screen, completes a photoelectric circuit to convey the screen location to the computer is a (n)
- 18- The input device whose upward-acting ball is manipulated by hand to cause corresponding cursor movement is the
- 19- devices are designed and used for obtaining data at the site where the transaction or event being reported takes place.
- 20- are devices that read printed codes, characters, or images and convert them into a form that can be processed by the computer.

The answer :

Statement's No.	The Missing Word(S)
1	Mouse.
2	Bar Code Reader.
3	Mouse.
4	Pointer.
5	Magnetic Ink Character Recognition (MICR).
6	OCR-A.
7	Barcode.
8	Optical Mark (OMR) technology.
9	Point-of-Sale (POS) terminals.
10	Touch screens.
11	Voice.
12	Dumb.
13	Intelligent.
14	Joystick.
15	Touch screen.
16	Digitizing tablet.
17	Light pen.
18	Trackball.
19	Data Collection.
20	Scanners.

B : For each of the following statements, chose the best response. You do not have rewrite the whole statement in your answer book, you may write the statement's number and the best response. Use the following format:

Statement's No	The Best Response
1- The is probably the most widely used mechanism for entering data into a computer-usable form	
a- MICR reader.	c- Key board.
b- CPU.	d- None of the above.
2- A is like a cash register with computing capabilities.	
a- Bar code reader.	c-Point of sale terminal.
b-Wand reader.	d- AU of the above.
3- A is a photoelectric scanner that read universal product code by means of laser.	
a- PUS terminal.	c- Wand reader.
b- Bar code reader.	d- Laser scanner.
4- A (n) terminal can be programmed to perform a variety of processing functions.	
a- Dumb.	c- Intelligent.
b- Smart.	d- None of the above.
5- MICR is used primarily in	
a- Retail.	c- Libraries.
b- Testing.	d- Banking.

- 6- Which of the following is a device that allows direct data entry in such places as factories and warehouses?
- a- Data collection device.
 - b- OCR reader.
 - c- POS terminals.
 - d- Bar code reader.
- 7- Which of the following accepts input data by letting the user point at the screen to select a choice?
- a- OCR-A.
 - b- Touch screen.
 - c- Track ball.
 - d- Scanner.
- 8- Which of the following is a handheld device for reading a standard typeface for optical characters?
- a- Wand Reader.
 - b- Digitizer.
 - c- Light pen.
 - d- UPS.
- 9- Voice input devices convert voice input to.
- a- Digital codes.
 - b- OCR-A.
 - c- Bar codes.
 - d- Optical marks.
- 10- Imaging uses, what device to input data?
- a- Bar code reader.
 - b- Icon.
 - c- Scanner.
 - d- Tablet.
- 11 Which input device is often attached to laptop computers:
- a- Trackball.
 - b- Graphic display.
 - c- Wand reader.
 - d- MICR.
- 12- POS terminals are similar to
- a- Calculators.
 - b- Touch screen.
 - c- Light pen.
 - d- Cash registers.

13- Magnetic characters are produced on your bank checks by.

a- Bar code Readers.

c- MICR inscribers.

b- Mice.

d- Terminal.

14- OCR -A- is a

a- Bar code.

c- Standard typeface.

b- Wand reader.

d- Digital codes.

15- Which of the following would not be considered to be an input device?

a- User response.

c- Light pen.

b- Touch screen.

d- Digitizers.

The answer :

Statement's No.	The Best Responses	
1	C	Keyboard.
2	C	Point of sale.
3	B	Bar code reader.
4	C	Intelligent.
5	D	Banking.
6	A	Data collection device.
7	B	Touch screen.
S	A	Wand Reader.
9	A	Digital codes.
10	C	Scanner.
11	A	Trackball.
12	D	Cash registers.
13	C	MICR
14	C	Standard Typeface.
15	A	User response.

C : Indicate whether each of the following statements is true (T), or false (F), and justify the false ones. You may organize your answer as follows:

Statement's No	T or F	Incorrect Term	Correct Term
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- 1- If the data is correct the resulting information produced from it will be incorrect.
- 2- A keyboard is a small input device used to control the movement of the cursor and to select options display on the screen.
- 3- Optical character reader is a type of machine-readable data used almost exclusively in the banking industry.
- 4- OMR senses marks on paper.
- 5- Optical marks may be used to record test answers.
- 6- Since they do not require a surface for movement, attached trackballs are common on laptop computers.
- 7- The standard typeface for character recognition is called NCR-A.
- 8- MICR input systems are often used for grading test answers.
- 9- Bar Code are read by optical recognition systems.

- 10- Terminal can be dumb, smart, and intelligent.**
- 11- A wand reader is often connected to a POS terminal in a retail store.**
- 12- Pointing devices include mouse, trackball, joystick, touch screen, light-pen, and digitizer tablet.**
- 13- Data collection devices are most commonly used in open work areas in factories and warehouses.**
- 14- A Bar code depicts a product's Universal Product Code.**
- 15- Bank checks are read by OCR.**

The Answer :

Statement's No	T or F	Incorrect Term	Correct Term
1	F	Correct Incorrect	Incorrect Correct
2	F	keyboard	Mouse
3	F	Optical character Reader	MICR
4	T	—	—
5	T	—	—
6	T	—	—
7	F	NCR-A	OCR-A
8	F	MICR	OMR
9	T	—	—
10	T	—	—
11	T	—	—
12	T	—	—
13	T	—	—
14	T	—	—
15	F	OCR	MICR

D: For each of the following statements, chose the best response:

1. An ink-jet printer is an example of a(n)....
 - a. laser printer
 - b. impact printer
 - c. LCD printer
 - d. nonimpact printer
2. Magnetic characters are produced on your bank checks by ...
 - a. bar-code readers
 - b. mice
 - c. MICR inscribers
 - d. OCR
3. "Mark sensing" is another term for.....
 - a. MICR
 - b. POS
 - c. OMR
 - d. XGA
4. A device used for optical character recognition is a ...
 - a. wand reader
 - b. cursor
 - c. pen
 - d. MICR reader
5. OCR-A is a.....
 - a. portrait
 - b. standard typeface
 - c. wand reader
 - d. bar code
6. POS terminals are similar to.....
 - a. calculators
 - b. touch-tone telephones
 - c. UPCs
 - d. cash registers
7. Voice input devices convert voice input to.....
 - a. digital codes
 - b. bar codes
 - c. OCR-A
 - d. optical marks
8. Imaging uses what device to input data?
 - a. scanner
 - b. bar-code reader
 - c. icon
 - d. tablet

9. The pointer can be moved by rolling this device on a flat surface:
- a. mouse
 - b. UPC
 - c. wand reader
 - d. interactive tablet
10. Which input device is often attached to laptop computers?
- a. trackball
 - b. graphic display
 - c. inscriber
 - d. wand reader
11. MICR is used primarily in.....
- a. retail.
 - b. libraries.
 - c. banking.
 - d. testing.
12. A "cash register" terminal in retail store is referred to as
- a. POS.
 - b. UPC
 - c. OMR
 - d. CAD/CAM
13. The photoelectric scanner that reads the code representing the Universal Product Code is the ...
- a. point-of-sale reader.
 - b. laser reader
 - c. bar code reader.
 - d. SVGA reader
14. A hand-held device for reading a standard typeface for optical characters is the.....
- a. UPC.
 - b. wand reader
 - c. digitizer
 - d. light pen.
15. A system that uses a light source to read special characters is...
- a. MICR.
 - b. CAD.
 - c. OCR.
 - d. LCD.

16. The input device that has a light-sensitive cell that directly interacts with the computer screen is the.....
- | | |
|---------------|--------------|
| a. light pen. | b. scanner. |
| c. trackball. | d. digitizer |
17. An input-output device with screen, keyboard, and a link to a main computer is a
- | | |
|--------------|----------------|
| a. terminal. | b. scanner |
| c. joystick. | d. wand reader |
18. A terminal that has some processing ability of its own is called a(n)..
- | | |
|---------------------|-------------------------|
| a. impact terminal. | c. LCD terminal |
| b. smart terminal | d. monochrome terminal. |
19. The technology that is not a method of optical recognition is.....
- | | |
|--------------|----------|
| a. OCR. | b. OMR. |
| c. scanning. | d. MICR. |

1	D	8	A	15	C
2	C	9	A	16	A
3	C	10	A	17	A
4	A	11	C	18	B
5	B	12	A	19	D
6	D	13	C		
7	A	14	B		

F : Indicate whether each of the following statements is true (T), or false (F)

1. Data is scanned into the computer using a mouse.
2. Optical recognition technology is based on magnetized data.
3. OMR senses marks on paper.
4. A wand reader can read OCR characters.
5. A mouse can be clicked to invoke a command.
6. The MICR process is used mainly by retail stores
7. A cursor indicates the location of the next interaction on the screen.

8. The best way to scan a page from a book is with a flatbed scanner.
9. A terminal that has the capability of doing some processing is called a smart terminal.
10. A laser printer is an impact printer.
11. Soft copy is printed output produced by laser printers.
12. Magnetic-ink character recognition machines are used primarily in libraries and government offices.
13. Voice input devices are technologically more advanced than voice- output devices.
14. Trackball is just another name for a mouse.
15. The cursor is the flashing indicator that remains at the top left of the screen whenever the computer is turned on.
16. Hand-held wand reader is used to read MICR characters.
17. Since they do not require a surface for movement, attached track balls are common on laptop computers.
18. Although POS terminals can be used in retail businesses, they are normally found in the offices of large businesses.
19. OMR input systems are often used for grading test answers

20. The standard typeface for character recognition systems is called NCR-A.
21. In addition to its cash register function, a POS terminal can gather information to be processed later by a computer.
22. Bar codes are read by optical recognition systems.
23. A bar code depicts a product's Universal Product Code.
24. Bar codes are limited to groceries and other in-store purchased items.
25. A terminal is another name for a personal computer.
26. A terminal has a screen and an input device such as a keyboard, but relies on its link to a computer for processing.
27. A joystick is used mainly to input data to business spreadsheets.
28. A light pen works by connecting a photoelectric circuit when the tip of the pen is placed at a point on the screen.
29. A touch screen accepts data by having a user press firmly on the screen so an impression is felt by the internal circuitry.
30. Generally, input is considered to be data and output is considered to be information.
31. A smart terminal has some processing ability.

- 32.** Imaging refers to scanning and storing documents that can be accessed later.
- 33.** A wand reader is usually attached to a MICR inscriber.
- 34.** OCR uses magnetic electrical signals to scan data.
- 35.** Touch screens are often included in kiosks used by the general public.
- 36.** A UPC uniquely identifies a product.
- 37.** Computer users are familiar with printed and screen output but rarely are associated with input data.
- 38.** The icon is the ball on the underside of a mouse.
- 39.** Two data types that can be input using optical recognition are bar codes and OCR-A characters.

1	F	14	F	27	F
2	F	15	F	28	T
3	T	16	F	29	F
4	T	17	T	30	T
5	T	18	F	31	T
6	F	19	T	32	T
7	T	20	F	33	F
8	T	21	T	34	F
9	T	22	T	35	T
10	F	23	T	36	T
11	F	24	F	37	F
12	F	25	F	38	F
13	F	26	T	39	T

G : Complete the following statements;

1. The standard optical typeface is known as
2. POS stands for.....
3. MICR stands for.....
4. Using a scanner to input documents to the computer is called...
5. UPC stands for.....
6. The input method used mainly by banks for processing checks is known as.....
7. The method that uses a light beam to sense marks on machine-readable test forms is called.....
8. The kind of terminal that reads bar codes but is like a cash register is the.....
9. Screen output is called.....
10. Printed computer output is called.....
11. An input device that reads OCR tags is the.....
12. .A screen that accepts input from a pointing finger is called a.....
13. The input device that is rolled on a flat surface to produce corresponding cursor movement is called a.....
14. The input device whose upward acing ball is manipulated by hand to cause corresponding cursor movement is called a.....

15. An optical recognition input method favored by the banking industry is.....
16. The standard typeface used for optical character recognition is....
17. The parallel black and white lines found on products to identify the product is called a.....
18. The optical input technology that recognizes marks made on a certain place on paper is called.....
19. Computerized cash registers are called.....
20. The unique code that identifies grocery products and other items is the
21. A graphics input device which, when it makes contact with the screen, completes a photoelectric circuit to convey the screen location to the computer is called a
22. The graphics input device used primarily for video games is called a
23. A Screen sensitive to input from a finger contact is called a
24. Devices that accept the spoken word and convert it into digital code are called
25. OCR stands for

The Answer

1	OCR-A	14	trackball
2	point of sale	16	magnetic-ink character recognition
3	magnetic-ink character recognition	16	OCR-A
4	imaging	17	bar code
5	Universal Product Code	18	optical mark technology (OMR)
6	MICR	19	point-of-sale terminals (POS)
7	OMR	20	Universal Product Code (UPC)
8	POS terminal	21	light pen
9	soft copy	22	joystick
10	hard copy	23	touch screen
11	wand reader	24	speech recognition
12	touch screen	25	optical character recognition
13	mouse		

Chapter (3)

INSIDE THE COMPUTER

Key Words :

1GB = Gega byte	جيجا بايت- بليون
1KB = Kilo byte	ألف بايت
1MB = Mega Byte	مليون بايت
1TB = Tera byte	تريلون بايت
Accumulator	الجامع
Address	عنوان
Arithmetic/ Logic Unit	وحدة الحساب والمنطق
Binary system	النظام الثنائي
Buses	الناقلات
Byte	وحدة تمثيل البيانات- البايت
Cache Memory	الذاكرة الإضافية
Clock Cycles	دوران الساعة
Control Unit	وحدة التحكم – الرقابة
Data Representation	تمثيل البيانات
Decimal System	النظام العشري
Decode	فك الشفرة
Decoder	وحدة فك الشفرة
Digital	رقمي
Execute	تنفيذ
Execution time (E-Time)	زمن التنفيذ
Fetch	إحضار
General Purpose Registers	مسجل الاستخدام العام
Hexadecimal system	النظام السادس عشر

Instruction time (I-Time)	زمن الأمر
Instruction Register	مسجل و أوامر
Internal Memory	الذاكرة الداخلية
Interpret	يفسر
Location	موقع
Mega Hertz (MHz)	ميغا هيرتز
Memory Capacity	طاقة الذاكرة
Non volatile	غير متطايرة
Peripherals	ملحقات
Primary Storage	التخزين الأولي – الرئيسي.
Processor Speed	سرعة المشغل
Program Register	مسجل البرنامج
Programmable-Read Only Memory (ROM)	ذاكرة القراءة فقط القابلة للبرمجة
Random Access Memory (RAM)	ذاكرة الاتصال العشوائي
Read Only Memory (ROM)	ذاكرة القراءة فقط
Registers	مسجلات
Retrieve	استرجاع
Secondary Storage	التخزين الثانوي
Static -RAM	الذاكرة الالكترونية الثابتة
Temporary	مؤقت
Volatile	متطايرة
Word Size	حجم الكلمة

A : Complete the following statements; you do not have to rewrite the whole statement in your answer book you may write the statement's number and missing word (s) : Use the Following Format :

Statement's No	The Best Response
----------------	-------------------

- 1- Name the four kinds of arithmetic operations performed by the arithmetic logic unit,
..... , , and
- 2- MHz is an abbreviation for
- 3- What is a combination of 1-time and E-time called?
.....
- 4- How is the location in memory of each instruction identified?
- 5- What is each 0 or 1 in the binary system called?
.....
- 6- What does MIPS stand for?
- 7- A data path to transfer data :
- 8- What does RAM stand for ?
- 9- Which type of storage stores programs that will not be altered ?
- 10- What does RISC stand for?
- 11- The two digits of the binary systemand....
- 12- DRAM stand for
- 13- List factors affecting computer speed: ,and
.....

- 14- What does CPU stand for ?
- 15- The hardware that has the circuitry to control the computer is called
- 16- A comparing operation such as greater than is what kind of operation ?
- 17- In addition to equal, less than, and greater than, there are three other logical relationships:, and
- 18- What kind of register can be used for multiple functions
- 19- A relatively small amount of fast memory used for storing recently used or frequently used instructions is called:
- 20- When during I-time the control unit gets instruction from memory it is said to be doing what?
- 21 -Each location within main memory has a
- 22- A byte is equal to binary digits.
- 23- American standard code for information Interchange abbreviated as, is a method for representing characters in memory.
- 24- The kind of ROM chip that can be changed is
- 25- A is one thousandth of a second.
- 26- A is one millionth of a second.
- 27- A is one billionth of a second.
- 28- A is one trillionth of a second.

- 29- The kind of register that collects the results of computations is the.....
- 30- Approximately one billion bytes equal a (n) :
- 31 -Approximately one million bytes equal a (n):
- 32 -The term for 1024 bytes is
- 33- The CPU has two fundamental parts , and
- 34- A bit which contains the value of is said to be off.
- 35- A bit which contains the value of is said to be on.

The answer:

Statement's No.	The Missing Word(S)
1	Addition, subtraction, multiplication, Division.
2	Megahertz.
3	Machine cycle.
4	An address.
5	A bit
6	Millions of Instructions Per Second. —
7	Bus line.
8	Random access memory
9	ROM
10	Reduced instruction set computer.
11	O and I.
12	Dynamic RAM

13	Microprocessor speed. bus line , cache, flash memory, RISC computers, and parallel processing.
14	Central Processing Unit.
15	Control unit.
16	Logical operation.
17	Less than or equal to, greater than or equal to, and less than or greater than.
18	General purpose register.
19	Cache.
20	Fetch
21	Address.
22	8.
23	ASCII.
24	EPROM.
25	Millisecond.
26	Microsecond.
27	Nanosecond.
28	Picoseconds.
29	Accumulator.
30	Gigabyte.
31	Megabyte.
32	Kilobyte (KB).
33	The control unit and ALU.
34	Zero.
35	One.

B : For each of the following statements, chose the best response. you do not have rewrite The whole statement in your answer book, you may write the statement's number and the best response. Use the following format:

- | Statement's No | The Best Response |
|----------------|-------------------|
|----------------|-------------------|
- 1- The control unit and the ALU together make:

a- KB	c- E time.
b- CPU.	d- I-time.
 - 2- Fetch and decode instruction make up

a- Storage register.	c- Accumulator register
b- E-time.	d- I-time.
 - 3- Which of the following contains circuitry that directs and coordinates the en computer system?

a- ALU.	c- Mouse
b- Control unit.	d- ASCII
 - 4- The first portion of the machine-cycle is:

a- Cache.	c- I-time.
b- Megahertz.	d- E-time.
 - 5- Which of the following contains circuitry that executes arithmetic and logical operations?

a- ALU.	c- ASCII.
b- Control unit.	d- Printer.
 - 6- A method of improving speed by using several processors at the same time is a- Flash memory. b- Bus lines.

a- Flash memory	c- Cache memory.
b- Bus lines	d- Parallel processing.
 - 7- Which of the following manipulates input data into processed information?

a- Disk dive.	c- CPU.
b- Screen.	d- Memory.

- 8- The electronic circuitry that temporarily stores data and instructions is called:
a- Key board. c- Memory.
b- CPU. d- Disk drive.
- 9- The extra bit used to signal the computer that bits haven't changed in transmission is called the bit
a- Parity. c- Verify.
b- Inspection. d- Confirm.
- 10- PROM is an abbreviation for read only memory.
a- Parity. c- Partial.
b- Primary. d- Programmable.
- 11- During E-time the ALU.
a- Examines the instruction, b- Enters the instruction.
c- Executes the instruction. d- Elicits the instruction.
- 12- A bus line consists of:
a- Registers. c- Accumulators.
b- Parallel dot paths. d- Machine cycles.
- 13- Equal to, less than, and greater than are examples of
a- Logical operations. c- Arithmetic operations.
b- Locations. d- Subtraction.
- 14- Data is represented on a computer by means of a two-state on/ off system called.
a- A word. c- The binary system.
b- A byte. d- RAM.
- 15- The shortest period of time is a
a- Millisecond. c- Nanosecond.
b- Picoseconds. d- Microsecond.

The answer :

Statement's No.	The Best Responses	
1	B	CPU
2	D	1-time
3	B	Control unit
4	C	1- time
5	A	ALU
6	D	Parallel processing
7	C	CPU
8	C	Memory
9	A	`Parity
10	D	Programmable
11	C	Executes the instruction
12	B	Parallel dot paths
13	A	Logical operations
14	C	The binary system
15	B	Picoseconds

C :Indicate whether each of the following statements is true (T), or false (F), and justify the false ones. You may organize your answer as follows:

Statement's No	T or F	Incorrect Term	Correct Term
-------------------	--------	-------------------	-----------------

- 1- The control unit directs and coordinates the entire computer system in executing stored program instructions with electrical signals.
- 2- The electronic circuitry that controls all arithmetic and logical operations is contained in the ALU.
- 3- Computers represent all data using a two-state on/off system called the binary system.
- 4- The ASCII coding scheme is accepted as the American standard.
- 5- A bit is commonly made up of 8 bytes.
- 6- A kilobyte (KB) is 1024 bytes.
- 7- Another name for memory is secondary storage.
- 8- The third and forth steps the CPU follows when executing an instruction are called I-time.
- 9- Each 0 or 1 in the binary system is called a byte.
- 10- Memory is usually volatile.
- 11- The programs stored on RAM chips are not altered..
- 12- A microsecond is briefer than a millisecond.
- 13- ROM is often divided into static and dynamic.
- 14- Semiconductor storage is nonvolatile.

- 15- A computer word is defined as the number of bits constituting a common unit of information for a specific computer system.**
- 16- The combination of I-time and E-time is called computer cycle.**
- 17- A megabyte stores more information than a gigabyte.**
- 18- Many processors, each with its own memory unit, working at the same time is called serial processing.**
- 19- The ALU is the part of the CPU that decodes instructions and directs the operation of the CPU.**
- 20- The machine cycle consists of four steps from the first step of fetching the instructions to the last step of placing the result of the operation into memory.**

The Answer :

Statement's No	T or F	Incorrect Term	Correct Term
1	T	-	-
2	T	-	-
3	T	-	-
4	T	-	-
5	F	Bit Bytes	Byte Bits
6	T	-	-
7	F	Secondary storage	primary storage
8	F	1- time	E- Time
9	F	Byte	Bit
10	T	-	-
11	F	RAM	ROM
12	T	-	-
13	F	ROM	RAM
14	F	Nonvolatile	Volatile
15	T	-	-
16	F	Computer	Machine
17	F	Megabyte Gigabyte	Gigabyte Megabyte
18	F	Serial	Parallel
19	F	ALU	Control unit
20	T	-	-

D : For each of the following statements, chose the best response.

- 1. The electrical circuitry that executes program instructions is the...**
 - a. register**
 - b. operator**
 - c. central processing unit**
 - d. bus line**
- 2. The entire computer system is coordinated by....**
 - a. the ALU**
 - b. the control unit**
 - c. registers**
 - d. arithmetic operators**
- 3. A bus line consists of.....**
 - a. registers**
 - b. parallel data paths**
 - c. megabytes**
 - d. machine cycles**
- 4. Equal to, less than, and greater than are examples of**
 - a. logical operations**
 - b. subtraction**
 - c. locations**
 - d. arithmetic operations**
- 5. The primary storage unit is also known as**
 - a. a register**
 - b. mass storage**
 - c. secondary storage**
 - d. memory**
- 6. Data and instructions are put into primary storage by....**
 - a. memory**
 - b. secondary storage**
 - c. the control unit**
 - d. the ALU**
- 7. During E-time the ALU....**
 - a. examines the instruction**
 - c. enters the instruction**
 - b. executes the instruction**
 - d. elicits the instruction**

8. When the control unit gets an instruction it is called ...
- a. E-time
 - b. I-time
 - c. machine time
 - d. ALU time
9. When the control unit directs the ALU to perform an operation on the data, the machine cycle is involved in its....
- a. first step
 - b. second step
 - c. third step
 - d. fourth step
10. Another name for primary storage is.....
- a. secondary storage
 - b. binary system
 - c. ROM
 - d. main storage
11. Which is *not* another name for memory?
- a. primary storage
 - b. internal storage
 - c. main storage
 - d. secondary storage
12. Data is represented on a computer by a two-state on/off system called..
- a. a word
 - b. a byte
 - c. the binary system
 - d. RAM
13. A letter, digit, or special character is represented by a..
- a. bit
 - b. byte
 - c. kilobyte
 - d. megabyte
14. Memory capacity may be expressed in.....
- a. microseconds
 - b. bits
 - c. megabytes
 - d. cycles

15. Which is not a kind of register?
- a. Accumulator
 - b. primary
 - c. storage
 - d. address
16. Which is not another name for memory?
- a. accumulator
 - b. main memory
 - c. primary storage
 - d. main storage
17. Physically, if a bit is 1, then the electrical circuit is ...
- a. off
 - b. both on and off.
 - c. on.
 - d. empty.
18. A non-volatile type of memory is....
- a. semiconductor.
 - b. MHz.
 - c. KB.
 - d. flash
19. Approximately one million bytes is known as a.....
- a. word
 - b. kilobyte
 - c. megabyte.
 - d. gigabyte
20. A set of parallel data paths to transport data internally in the computer system is called a.....
- a. transistor
 - b. cache.
 - c. bus line
 - d. picoseconds
21. The combination of I-time and E-time is called
- a. machine time.
 - b. computer time.
 - c. machine cycle
 - d. cache cycle
22. Data and instructions are brought into memory from an input device by.....
- a. the ALU
 - b. ROM burners.
 - c. the control unit
 - d. flash memory,

23. Fast memory that stores frequently used instructions and data is called.

- a. cache
- b. KB.
- c. ALU.
- d. an address register

24. The first portion of the machine cycle is.....

- a. cache
- b. I-time.
- c. megahertz.
- d. E-time

25. The abbreviation for a computer speed measurement of instructions per second, in the millions is.....

- a. MHz
- b. RAM.
- c. megaflop
- d. MIPS.

26. Memory that loses its contents when the power is turned off is called..

- a. Volatile
- b. PROM
- c. general purpose
- d. symbolic

27. Semiconductor memory has the advantages of.....

- a. size and direction.
- b. reliability and compactness
- c. measurement and control
- d. speed and resilience

1.	C	10.	D	19.	C
2.	B	11.	D	20.	C
3.	B	12.	C	21.	C
4.	A	13.	B	22.	C
5.	D	14.	C	23.	A
6.	C	15.	B	24.	B
7.	B	16.	A	25.	D
8.	B	17.	C	26.	A
9.	C	18.	D	27.	B

E : Indicate whether each of the following statements is true (T), or false (F):

- 1. The control unit consists of the CPU and the ALU.**
- 2. Secondary storage holds data only temporarily.**
- 3. The control unit directs the entire computer system**
- 4. MIPS is an abbreviation for megaflop**
- 5. The electronic circuitry that controls all arithmetic and logical operations is contained in the ALU.**
- 6. Memory allows fast access to instructions in secondary storage.**
- 7. Registers are temporary storage areas located in memory.**

- 8. Memory is usually volatile.**
- 9. All computers except personal computers can execute more than one instruction at a time.**
- 10. The machine cycle consists of four steps, from the first step of fetching the instruction to the last step of storing the result in memory**
- 11. A cache is a small amount of secondary storage.**
- 12. Computers represent data using the two-state binary system**
- 13. A bit is commonly made up of 8 bytes.**
- 14. A kilobyte (KB) is 1024 bytes.**
- 15. The central processing unit consists of two parts, the arithmetic unit and the logic unit.**
- 16. Memory is also referred to as primary address**
- 17. The control unit fetches and decodes an instruction**
- 18. The control unit fetches data and then decodes it**
- 19. The control unit fetches an instruction and then executes arithmetic instructions.**
- 20. The combination of I-time and E-time is called the machine cycle.**
- 21. E-time is the combination of fetching and decoding an instruction**
- 22. The arithmetic/logic unit executes arithmetic and logic instructions**
- 23. The binary system uses just two digits, 1 and 2**

- 24. In the binary system, the two digits represent the two states on and off.**
- 25. The term bit means binary digit.**
- 26. Physically, a 0 bit means an electrical circuit is on and a 1 bit means the circuit is off.**
- 27. Bits are grouped together to form a byte.**
- 28. A byte usually represents four or more characters.**
- 29. A word represents a single character.**
- 30. A kilobyte is 10 to the second power (10^2).**
- 31. A gigabyte refers to a billion bytes.**
- 32. The major advantage of semiconductor storage is that it is volatile.**
- 33. ROM is another name for RAM.**
- 34. Generally, the more RAM in your computer, the larger the programs you can run.**
- 35. A microsecond is one-billionth of a second.**
- 36. Cache memory contains data and instructions that are rarely used .**
- 37. A picosecond is one trillionth of a second**
- 38. 39 Cache is a relatively small amount of very slow memory**
- 39. Memory is part of the CPU.**
- 40. Accumulator, address, and storage are all types of registers**

41. Each instruction in memory is assigned an address.

42. The four steps of the machine cycle are executed by the control unit.

43. A character of data is represented by a bit.

44. K stands for kilobit

45. The ALU must fetch an instruction before it can decode it.

1.	F	16.	F	31.	T
2.	F	17.	T	32.	F
3.	T	18.	F	33.	F
4.	F	19.	F	34.	T
5.	T	20.	T	35.	F
6.	F	21.	F	36.	F
7.	F	22.	T	37.	T
8.	T	23.	F	38.	F
9.	F	24.	T	39.	F
10.	T	25.	T	40.	T
11.	F	26.	F	41.	T
12.	T	27.	T	42.	F
13.	F	28.	F	43.	F
14.	T	29.	F	44.	F
15.	F	30.	F	45.	T

F : Complete the following statements:

- 1. A millionth of a second is called a(n).....**
- 2. The unit that consists of both the control unit and the arithmetic/logic unit is the.....**
- 3. When the control unit decodes an instruction, is the machine cycle in I-time or E-time?.....**
- 4. MHz is an abbreviation fo.....**
- 5. The abbreviation used for memory chips that can be altered is..**
- 6. The combination of I-time and E-time is called a....**
- 7. Each memory location is identified by a(n).....**
- 8. A 0 or 1 in the binary system is called a(n)...**
- 9. MIPS stands for.....**
- 10. A disadvantage of semiconductor memory is that....**
- 11. The kind of memory that is non-volatile is called...**
- 12. The electrical path that carries data from one place to another internally in the computer system is called a.....**
- 13. A small amount of fast memory that stores data and instructions used frequently is called**
- 14. The unit of measure for microprocessor speed is.....**

15. One-thousandth of a second is a.....
16. The combination of the control unit and the arithmetic/logic unit is the.....
17. Accumulator, storage, and address are kinds of
18. Fetching plus decoding an instruction together comprise....
19. Executing an instruction and storing the results together comprise..
20. The part of the CPU that performs E-time is the...
21. The part of the CPU that performs I-time is the.....
22. The number of digits in the binary system is.....
23. The ALU executes what two kinds of operations? .
24. The kind of register that collects the results of computations is..
25. The term for approximately one million bytes is...
26. The number total number of steps in the machine cycle is...

1.	microsecond	14.	megahertz
2.	central processing unit	15.	millisecond
3.	I-time	16.	central processing unit
4.	megahertz	1.	registers
5.	PROM	18.	I-time
6.	machine cycle	19.	E-time
7.	address	20.	arithmetic/logic unit
8.	bit	21.	control unit
9.	one million instructions per second	22.	two
10.	it is volatile	23.	arithmetic and logical
11.	flash memory	24.	accumulator
12.	bus line	25.	megabyte
13.	cache	26.	four

Chapter (4)

AUXILARY STORAGE

Key Words :

Access Time	وقت الوصول
Auxiliary Storage	التخزين الاضافي
Backup	نسخة إضافية
Boot Sector	القطاع الأول
CD- ROM	أسطوانة مضغوطة للقراءة فقط
Compact Disks (CD)	اسطوانة مضغوطة
Convenience	الملاءمة
Cylinder	الاسطوانة
Density	الكثافة
Direct-Access Storage Devices	وسائط الاتصال المباشر (العشوائي)
Disk Formatting	تهيئة تقسيم القرص
Economy	اقتصادي
Floppy Disk	القرص المرن
Hard Disk	القرص الصلب
Magnetic Tape Drive	الشريط الممغنط
Magnetic Tape Drive	جهاز تشغيل الشريط الممغنط
Number of sides	عدد الأسطح
Optical Disks	اسطوانة ضوئية
Read Head	رأس القراءة
Sectors	قطاعات
Sequential-Access Storage Devices	وسائط الاتصال المتتابع
Tracks	مسارات
Write Head	رأس الكتابة
Write Once Read Many =Worm Disk	اسطوانة للكتابة مرة واحدة فقط

A : Complete the following statements; you do not have to rewrite the whole statement in your answer book you may write the statement's number and missing word (s) : Use the Following Format :

Statement's No	The Best Response
----------------	-------------------

- 1- The two common means of secondary storage are and
- 2- The three factors that determine the storage capacity of the floppy , diskette and
- 3- The diskette is inches in diameter, and the micro floppy is..... inches in diameter.
- 4- List four benefits of secondary storage,, and
- 5 The type of software that can offer photos, music, narration and more :
- 6- DASD stands for
- 7- CD-ROM stands for
- 8- The primary advantage of optical disk technology is
- 9- The smallest unit of raw data is
- 10- Organizing data vertically on a disk pack is called what method ?

- 11- A hard disk pack usually has two read/ write heads for each
- 12- The is a storage technology that uses laser beams to store data
- 13- On a magnetic tape drive, the name of the drive that detects or records data on the tape is
- 14- In addition to a sound card and speakers, a multimedia user will need this hardware
- 15- The acronym WORM stands for

The answer :

Statement's No.	The Missing Word(S)
1	Magnetic tape and magnetic disk.
2	Number of sides, recording density and number of tracks.
3	51/4-31/2.
4	Space, reliability, convenience, and economy.
5	Multimedia.
6	Direct Access Storage Device.
7	Compact Disk Read Only Memory.
8	High capacity.
9	Character.
10	Cylinder method.
11	Access ann.
12	Optical disk.
13	Read/write head.
14	CD-ROM drive.
15	Write once, read many.

- 6- The mechanism for reading or writing data on a disk is called a (n)
a- Track. c-key.
b-WORM d- Access arm.
- 7- Which of the following refers to a disk that may be written to only once?
a- Winchester. c- Erasable.
b- WORM. d- Floppy.
- 8- The time required for the access arm to get into position over a particular track is.
a- Rotational delay. c- Data transfer.
b- Seek time. d- Head switching
- 9- A way of physically organizing data on a disk pack to minimize time uses.
a- Sequential file. b- The cylinder method.
c- Removable hard disk cartridge.
d- Winchester technology.
- 10- The speed with which a disk can find data being sought is called.
a- Access time. c- Data transfer time.
b- Direct time. d- Cylinder time.
- 11- The disk storage that uses both a magnet and a laser beam
a- Hashing. c- Magneto-optical
b- CD-ROM. d- WORM.
- 12- Which is not a benefit of secondary storage?
a- Convenience. c- DAT.
b- Economy. d- Space.

- 13- CD-ROM has the same format as a (ii).
a- Backup tape. c- DAT.
b- Diskette. D- Audio compact disk,
- 14- The concept of using several small disk packs that work together as a unit is.
a- CD-ROM. c- RAID.
b- WORM. d- MO.
- 15- Assigning more sectors to outer disk tracks is called.
a- Zone recording. c- Randomizing.
b- Data transfer. d- Sectoring.
- 16- The ability to return a changed disk record to its original location is called.
a- Magneto-optical. c- Rotational delay.
b- Multimedia. d- Updating in place.
- 17- Which of the following is a method of recording data on a diskette that places the same amount of data on each track?
a- Sector. c- Batch.
b- Zone. d- Cylinder.
- 18- Multimedia software is offered on which kind of storage medium?
a- Floppy disk. c- CD-ROM.
b- Magnetic tape. d- Winchester.
- 19- A magnetic disk is which kind of storage device?
a- Indirect-access. c- Direct-access.
b- Batch-access. d- Sequential-access.
- 20- The diskette data recording method assigns more data to outer tracks than inner tracks
a- Winchester. c- Zone.
b- Sector. d- Batch.

The answer :

Statement's No.	The Best Responses	
1	B	Memory
2	D	Optical disk
3	B	Secondary storage
4	A	Winchester
5	D	Auxiliary storage
6	D	Access arm
7	B	WORM
8	B	Seek time
9	B	The cylinder method
10	A	Access time.
11	C	Magneto- optical
12	C	DAT
13	D	Audio compact disk
14	C	RAID
15	A	Zone recording
16	D	Updating in place
17	A	Sector
18	C	CD – ROM
19	C	Direct- access
20	C	Zone

C : Indicate whether each of the following statements is true (T), or false (F), and justify the false ones. You may organize your answer as follows :

Statement's No	T or F	Incorrect Term	Correct Term
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- 1- Secondary storage is also called primary storage
- 2- Auxiliary storage is said to be volatile because data is lost when the power is turned off
- 3- Multimedia software can include film clips.
- 4- Density is the number of characters per inch
- 5- The 3 1/2 inch diskette has less storage capacity than the larger 5 1/4 inch diskette
- 6- Winchester technology places disks, access arms, and read/write heads in a sealed module.
- 7- A magnetic tape is a direct access storage device.
- 8- Secondary storage devices could be categorized into sequential access or direct (random) access devices
- 9- A magnetic disk has concentric tracks.
- 10- Secondary storage unit is used for relatively short term storage.

- 11- Secondary storage unit is physically separate from the CPU.
- 12- Zone recording takes full advantage of the space on a disk track.
- 13- CD-ROM disks have much greater storage than traditional magnetic diskettes.
- 14- Data is stored on magnetic disks using light beams.
- 15- A magnetic disk is coated with magnetic oxide.

The Answer :

Statement's No	T or F	Incorrect Term	Correct Term
1	F	Primary	Auxiliary
2	F	Volatile Lost	Nonvolatile Retained
3	T	-	-
4	T	-	-
5	F	31/ 2 51/ 4	51/ 4 31/ 2
6	T	-	-
7	F	Tape	Disk
8	F	Devices	Media
9	T	-	-
10	F	Short	Long
11	T	-	-
12	T	-	-
13	T	-	-
14	F	Light beams	Menagerie spots
15	T	-	-

D : For each of the following statements, chose the best response.

1. The density of data stored on magnetic tape is expressed as..
a. units per inch c. packs per inch
b. tracks per inch d. bytes per inch
2. Another name for secondary storage is...
a. cylinder storage b. density
c. auxiliary d. storage memory
3. A magnetized spot represents.....
a. CPI b. a zone
c. MB d. 1 bit
4. Optical disk technology uses.....
a. helical scanning b. DAT
c. a laser beam d. RAID
5. The mechanism for reading or writing data on a disk is called a(n)..
a. track b. WORM
c. key d. access arm
6. The time required to position the access arm over a particular track is known as.....
a .rotational delay b. seek time
c. data transfer d. head switching
7. A way of organizing data on a disk pack to minimize seek time is through use of.....
a .sequential files b. the cylinder method
c. sequential order d. hashing

8. The speed with which a disk can find data being sought is called.....
- a. access time
 - b. direct time
 - c data transfer time
 - d. cylinder time
9. The disk storage that uses both a magnet and a laser beam:
- a. hashing
 - b. CD-ROM
 - c. magneto-optical
 - d. WORM
10. Assigning more sectors to outer disk tracks:.....
- a. zone recording
 - b. data transfer
 - c. randomizing
 - d .sectoring
11. Secondary storage is also called
- a. accessory storage
 - b. auxiliary storage.
 - c. memory
 - d. temporary storage
12. The storage medium with the highest capacity for holding data is.....
- a. CD-ROM.
 - b. DVD-ROM.
 - c. diskette.
 - d. WORM
13. The part of the magnetic tape unit that records and retrieves data is the...
- a. input/output drive.
 - c. record/retrieve head.
 - b.read/write head
 - d. read/write drive.
14. The kind of disk that may be written to only once is called...
- a. diskette
 - b. magneto-optical
 - c. WORM
 - d. RAID

15. The disk format that is identical to audio compact disks is.....
- a. diskette.
 - b. CD-ROM.
 - c. MPEG.
 - d. magneto-optical.
16. A magnetic disk is the kind of storage device called.....
- a. indirect access
 - b. batch-access
 - c. sequential access
 - d. direct access
17. Multimedia software is offered on the storage medium called...
- a. diskette
 - b. CD-ROM.
 - c. helical.
 - d. DAT
18. The method of recording data on a diskette that places the same amount of data on each track is called....
- a. sector.
 - b. batch.
 - c. zone.
 - d. cylinder
19. The time while desired data on a disk track moves under the read/write head is known as.....
- a. rotational delay
 - b. batch time
 - c. optical time.
 - d. head switching
20. The diskette data recording method that assigns more data to outer tracks than inner tracks is called.....
- a. RAID.
 - b. sector.
 - c. zone.
 - d. batch

21. When accessing disk data, seek time, head switching, and rotational delay are all factors affecting
- a. randomizing
 - b. helical scanning
 - c. collisions.
 - d. access time.
22. Magnetic media represent data as
- a. stripes
 - b. spots
 - c. MPEGs.
 - d. lasers.
23. The amount of data that can be stored on a tape is expressed as its....
- a. sector.
 - b. density
 - c. helical.
 - d. seek time.
24. CD-ROM, DVD-ROM, and CD-R are all.....
- a. read-only
 - c. types of RAID storage
 - b. WORMs.
 - d. types of optical storage

The Answer

1	D	9	C	17	B
2	C	10	A	18	A
3	D	11	B	19	A
4	C	12	B	20	B
5	D	13	B	21	D
6	B	14	C	22	B
7	B	15	B	23	B
8	A	16	D	24	D

E : Indicate whether each of the following statements is true (T), or false (F),

- 1. CD-R technology permits writing on CD-ROMs.**
- 2. A magnetic tape unit records data on tape but cannot retrieve it**
- 3. WORM can be written once; then it becomes read-only.**
- 4. Rotational delay comes before seek time.**
- 5. Density is the number of characters per inch.**
- 6. The most common backup medium is CD-ROM**
- 7. Multimedia software can include film clips.**
- 8. Hard disks have disks, access arms, and read/write heads in a sealed module**
- 9. Magneto-optical refers to a special type of tape that records data diagonally**
- 10. A magnetic disk has concentric tracks.**
- 11. Auxiliary storage is another name for memory.**
- 12. A key reason that secondary storage is needed is that it has greater storage capacity than memory.**
- 13. Data on secondary storage may reside there only temporarily, while it is being processed.**

- 14. Secondary storage can store much more data than primary storage.**
- 15. Secondary storage can be used to store both data and software.**
- 16. Magnetic tape is particularly useful for transaction processing**
- 17. Data on magnetic tape is written by the tape unit's read/write head. .**
- 18. Data is stored on magnetic disks using light beams.**
- 19. Magnetic disk is coated with magnetic oxide.**
- 20. A principal use of magnetic tape today is as a file backup medium.**
- 21. The 3½-inch diskette has less storage capacity than a CD-ROM.**
- 22. Data on hard disk packs is arranged in cylinders.**
- 23. CD-ROM disks have much greater storage capacity than traditional magnetic diskettes.**
- 24. Typical multimedia hardware includes a CD-ROM drive, a sound card, and speakers.**
- 25. Multimedia applications offer artwork illustrations but not photos.**
- 26. Magneto-optical disk can be read but not written on.**

27. Rotational delay affects seek time.
28. When reading or writing directly to disk, seek time is the combination of access time and data transfer rate.
29. The data transfer rate affects access time.
30. Data on magnetic disk is stored as magnetized laser beams.
31. CD-R optical disks can be written on..
32. DVD-ROM is a magnetic storage medium with very large capacity.
33. Multimedia is possible because of the high data storage capacity of optical disks.

The Answer

1	T	12	F	23	T
2	F	13	F	24	T
3	T	14	T	25	F
4	F	15	T	26	F
5	T	16	F	27	F
6	F	17	T	28	F
7	T	18	F	29	T
8	T	19	T	30	F
9	F	20	T	31	T
10	T	21	F	32	F
11	F	22	T	33	T

F : Complete the following statements:

- 1. Adding more sectors to the outer tracks of a disk is called....**
- 2. The primary advantage of optical disk technology lies in its....**
- 3. The type of software that can offer photos, narration, music, and more is called.....**
- 4. What does CD-ROM stand for?.....**
- 5. A disk that has magnetically sensitive metallic crystals embedded in the plastic coating is called.....**
- 6. The method of organizing data vertically on a disk pack is the.....**
- 7. Four benefits of secondary storage:.....**
- 8. The three primary factors that determine access time for disk data?..**
- 9. The storage medium often used to back up data is....**
- 10. The storage technology that uses laser beams to store data is.....**
- 11. Data is stored vertically on a disk pack in an arrangement called a...**
- 12. A CD-ROM disk uses which kind of storage technology?**
- 13. The storage medium that stores records only sequentially is...**

- 14. Since a WORM disk can be written to only once, it is considered...**
- 15. The collection of hardware and software that permits data to be presented with illustrations, photos, and sound is called.....**
- 16. In addition to a sound card and speakers, a multimedia user will need the storage device called.....**
- 17. The acronym WORM stands for.....**
- 18. The optical storage medium that can record on two sides of the disk is..**
- 19. A measurement in bpi of the amount of data on a tape is the tape's....**
- 20. The measurement of how fast data can be moved to and from disk is called.....**
- 21. CPI stands for.....**
- 22. The time needed to read or write disk data is called.....**
- 23. The waiting period until desired disk data moves under the read/write head is called.....**
- 24. The general name for permanent or semi-permanent storage (as opposed to memory) is....**
- 25. Recording on a diskette by assigning more sectors to outer tracks than to the inner tracks is called.....**

26. When reading or writing to a disk, the activity just before head switching is.....
27. The hybrid disk that has the large capacity of an optical disk but can be overwritten like a magnetic disk is called.....
28. Density is expressed as bytes-per-

The Answer

1	Zone Recording	15	multimedia
2	Capacity	16	CD-ROM drive
3	Multimedia	17	write once, read many
4	compact disk read-only memory	18	DVD-ROM
5	magneto-optical	19	density
6	cylinder method	20	data transfer rate
7	space, reliability, convenience, economy	21	characters per inch
8	seek time, head switching, rotational delay,	22	access time
9	magnetic tape	23	rotational delay
10	optical disk	24	secondary storage
11	cylinder	25	zone recording
12	optical	26	seek time
13	magnetic tape	27	magneto-optical (MO)
14	non erasable	28	inch

Chapter 5

OUTPUT FROM THE COMPUTER

Keywords:

Band Printers	الطابعات ذات السير
Bar	أعمدة
Cathode Ray tube (CRT)	أنبوبة أشعة الكاثود
Chain Printers	الطابعات بالسلسلة
Charts	خرائط
Computer output Microfilm (COM)	مخرجات الميكروفيلم للحاسب
Daisy Wheel Printers	الطابعات ذات العجلة
Detail	تفصيلي
Dot Matrix Printers	الطابعات النقطية
Drum	اسطوانة
Exception	استثناء
External	خارجي
Flat-bed Plotter	الراسم المسطح
Hammer	مطرقة
Impact	تصادمية
Ink-Jet Printers	طابعات الحبر النفث
Internal	داخلي
Laser Printers	طابعات الليزر
Line Printers Microfiche	الطابعات بالسطر
Microfiche	شرائح مصغرة
Monochrome screen	شاشة احادية اللون – ذات لون واحد
Non-Impact	غير تصادمية
Permanent	دائم
Pie	الفطيرة
Pixels	نقاط شاشة الحاسب
Plotters	الراسم البياني
Printer	طابعة
Reports	تقارير
Resolution	النقاء
Screens- Monitors	شاشات
Summary	ملخص
Thermal Printers	الطابعات الحرارية

A : Complete the following statements; you do not have to rewrite the whole statement in your answer book you may write the statement's number and missing word (s) : Use the Following Format :

Statement's No	The Best Response
----------------	-------------------

- 1- What does LCD stand for ?
- 2- What is the term for the 4X6 inch sheets of film used for COM ?
- 3- What is screen output called ?
- 4- What is printed computer output called ?
- 5- A type of non impact printers that uses a light source.....
- 6- The most type of screen is the
- 7- A dot matrix printer is an example of printers.
- 8- and printers are examples of non impact printers.
- 9- A daisy wheel printer is an example of an printer.
- 10- printers spray ink from jet nozzles.
- 11- A is a device that can draw graphics output.
- 12- Printers that make physical contact with the paper are said to be

- 13- represent information in an organized form.
- 14- are those reports used by individuals within an organization.
- 15- are those reports used by individuals outside the organization.
- 16- The two types of impact printers are striking and striking printers.
- 17- The printer uses heat to produce output.
- 18- The printer works like a photocopy machine and supports desktop publishing.
- 19- Screens will generally be either monochrome or
- 20- The of a computer screen refers to its clarity.

The Answer :

Statement's No.	The Missing Word(S)
1	Liquid crystal display.
2	Microfiche.
3	Soft copy.
4	hard copy.
5	Laser.
6	CRT (cathode Ray Tube).
7	Impact.
8	Ink-jet.
9	Impact.
10	Ink-jet.
11	Plotter.
12	Impact.
13	Report.
14	Internal Reports.
15	External Reports.
16	Front - Hammer.
17	Thermal.
18	Laser
19	Color.
20	Resolution.

B : For each of the following statements, chose the best response. you do not have rewrite The whole statement in your answer book, you may write the statement's number and the best response. Use the following format:

Statement's No	The Best Response
----------------	-------------------

- 1- Computer output produced as small film images is called.....
 a- OCR. b- LCD c- COM d- OMR.
- 2- Soft copy refers to
 a- OCR-A. c- Digitizing.
 b- Microfiche. d- Screen output.
- 3- The CRT technology with, the best resolution
 a- MICR. c- COM.
 b- LCD. d- OMR.
- 4- An ink-jet printer is an example of a (n)
 a- Laser printer. c- COM printer.
 b- Impact printer. d- Non impact printer.
- 5- The name for the screen's clarity
 a- Resolution. c- Pixel.
 b- Discrete. d- LCD

6- Printer that forms characters from a series of dots is called

- a- MTCR.** **c- Scanner.**
- b- Dot matrix.** **d- Plotter.**

7- Another word for pointer

- a- Monochrome.** **b- Pixel.**
- c- Microfiche.** **d- Cursor.**

8- The printers form characters by spraying ink from nozzles on the paper.

- a- Laser.** **c- Dot matrix.**
- b- Ink-jet.** **d- Daisy wheel.**

9- A typical character printer is the

- a- Laser.** **c- Dot matrix.**
- b- Daisy wheel.** **d- Ink-jet.**

10- The most common type of screen is the

- a- CRT.** **c- Video display.**
- b- Monochrome monitor.** **d- Flat screen.**

11- In a system characters and graphics appear in only one color.

- a- CRT.** **c- VDT.**
- b- Monochrome monitor.** **d- Flat screen.**

12- A screen dot is called a (n)

- a- Dot matrix.** **C- CRT.**
- b- Pixel.** **d- VDT.**

- 13- The more screen pixels, the better the screen's**
a- Recognition b-Synthesis.
b- Resolution. d- Discrete system.
- 14- Printer Output is considered to be**
a- COM. c- Hard copy.
b- Soft copy. d- Video graphics.
- 15- A detail report is**
a- Only used within an organization.
b- Used to share business details with stockholder
c- Shows only the totals summarized from the detail information.
d- Usually contains one line of print for each record processed.

The Answer :

Statement's No.	The Best Responses	
1	C	COM.
2	D	Screen output.
3	B	LCD.
4	D	Non impact printer.
5	A	Resolution.
6	B	Dot matrix.
7	D	Cursor.
8	B	Ink-Jet.
9	B	Daisy.
10	A	CR1.
11	B	Monochrome monitor.
12	B	Pixel.
13	B	Resolution.
14	C	Hardcopy.
15	D	Usually contains one line of print for each record processed.

C : Indicate whether each of the following statements is true (T), or false (F), and justify the false ones. You may organize your answer as follows :

Statement's No	T or F	Incorrect Term	Correct Term
-------------------	--------	-------------------	-----------------

- 1- Output of printers is known as soft copy.
- 2- A dot matrix printer is a non impact printer.
- 3- Non impact printers are faster and quitter than impact printers.
- 4- Color monitors are more formally known as monochrome monitors.
- 5- A Terminal with a screen is called a video display terminals.
- 6- Computer output microfilm was developed to save space.
- 7- Laser printer can print a page at a time.
- 8- Output on the computer screen is considered hard copy.
- 9- Dot-matrix printers produce characters using closely spaced dots.
- 10- The resolution of a screen is a measure of its clarity.
- 11- Laser printers are considered non impact because they spray ink onto paper from multiple nozzles.

- 12- Ink-jet printers are especially noted for high quality color output.
- 13- Laser printers use a light beam to transfer data images to paper.
- 14- The more pixels on a screen the greater the screen resolution.
- 15- The two most commonly known input devices are printers and CRT. screens.

The Answer :

Statement's No	T or F	Incorrect Term	Correct Term
1	F	Printers OR Soft copy	Screens Hard Copy
2	F	Non-impact	Impact
3	T	—	—
4	F	Color	One color
5	T	—	—
6	T	—	—
7	T	—	—
8	F	Hard copy	Soft copy
9	T	—	—
10	T	—	—
11	F	Laser	ink-jet
12	T	—	—
13	T	—	—
14	T	—	—
15	F	Input	Output

D : For each of the following statements, chose the best response.

1.Soft copy refers to.....

- | | |
|-------------------------|------------------------|
| a. OCR-A | b. music sounds |
| c. screen output | d .digitizing |

2.An ink-jet printer is an example of a(n)

- | | |
|-------------------------|-----------------------------|
| a. laser printer | b. impact printer |
| c. LCD printer | d. nonimpact printer |

3. A one-color screen on a black background is called.....

- | | |
|-----------------------|----------------------------------|
| a. monochrome | b. blank |
| c. addressable | d. liquid crystal display |

4. An example of a graphics output device is a....

- | | |
|----------------------|------------------------------|
| a. plotter. | b. mouse. |
| c. joy stick. | d. digitizing tablet. |

5. The type of flat screen usually found on laptop computers is

- | | |
|----------------|-------------------|
| a. LCD. | b. POS. |
| c. CRT. | d. plotter |

6. The type of printer that uses physical contact with the paper to produce an image is described as

- | | |
|--------------------|-------------------|
| a. ink-jet. | b. laser. |
| c. impact | d. contact |

7. A type of printer that is distinguished as fast and quiet, and makes an image on paper using a light beam is.....

- a. ink-jet.
- b. impact
- c. point-of-sale.
- d. laser.

8. The dots that make up a screen display are.....

- a. OMRs.
- b. pixels
- c. EGAs.
- d. cursors

9. The technology used by most desktop computer screens is

- a. CRT.
- b. UPC
- c. MICR.
- d. OCR

10. A screen dot is called a(n)....

- a. icon.
- b. pixel.
- c. CRT
- d. LED

11. Which is not a color screen standard?

- a. SVGA
- b. XGA
- c. VGA
- d. EGA

12. Printer output is considered.....

- a. CAD/CAM.
- b. hard copy.
- c. soft copy.
- d. video graphics

13. The type of printer that forms images on paper by spraying from nozzles is.

- a. ink-jet.
- b. laser.
- c. monochrome.
- d. impact.

14. The word that means the clarity of the screen is

- a. raster
- b. impact.
- c. scan
- d. resolution

15. The more screen pixels, the better the screen's

- a. discrete system.
- b. synthesis.
- c. resolution.
- d. recognition

16. Printer output quality is measured in terms of

- a. images per scan.
- b. pages per minute.
- c. lines per page.
- d. dots per inch

17. Each screen dot is considered.....

- a. addressable
- b. cod able
- c. adaptable
- d. magnetized

18. Screen output is sometimes referred to as

- a. MICR copy.
- b. soft copy.
- c. scan copy
- d. hard copy

The Answer :

1	C	7	D	13	A
2	D	8	B	14	D
3	A	9	A	15	C
4	A	10	B	16	D
5	A	11	B	17	A
6	C	12	B	18	B

E : Indicate whether each of the following statements is true (T), or false (F)

- 1. The greater the number of pixels, the poorer the screen clarity.**
- 2. Printers produce hard copy.**
- 3. Video graphics are computer-produced pictures**
- 4. CRT stands for computer remote terminal.**
- 5. LCD is a type of flat screen found on laptop computers.**
- 6. LCD stands for liquid crystal display.**
- 7. The personal computer screen standard with the highest resolution is CGA.**
- 8. A cursor indicates the location of the next interaction on the screen.**
- 9. One color screen standard today is XGA.**
- 10. Flat screens can be found on desktop computers as well as laptop computers.**
- 11. A laser printer is an impact printer.**
- 12. A digital camera uses an embedded chip to focus the picture but records the picture on regular film.**
- 13. Soft copy is printed output produced by laser printers.**
- 14. Plotters are used to scan handwritten input.**
- 15. Most desktop computer screens use LCD technology.**

- 16. Video graphics are used to produce computer-animated pictures.**
- 17. Output on the computer screen is considered soft copy.**
- 18. A monochrome screen is limited to the four primary colors.**
- 19. Generally speaking, the fewer number of dots use to produce a printed character, the greater the clarity of the output.**
- 20. A pixel is a picture element on printed output.**
- 21. The resolution of a screen is a measure of its clarity.**
- 22. Pixels on screens are illuminated in groups, depending on their location on the screen.**
- 23. Generally, the more pixels on a screen the greater the screen resolution.**
- 24. Since an impact printer makes a physical connection with the paper, it will be noisier than a non-impact printer.**
- 25. Laser printers use a light beam to transfer data images to paper.**
- 26. Laser printers print an entire page at a time.**
- 27. Laser printers are considered non-impact because they spray ink onto paper from multiple nozzles.**
- 28. Ink-jet printers are especially noted for high quality color output.**
- 29. Computer output can sometimes be an almost instant reaction to computer input.**

30. Each pixel on a screen can be addressed individually.
31. Both laser and ink-jet printers are considered impact printers.
32. Imaging refers to graphics printed by an ink-jet printer.

The Answer :

1	F	12	F	23	T
2	T	13	F	24	T
3	T	14	F	25	T
4	F	15	F	26	T
5	T	16	T	27	F
6	T	17	T	28	T
7	F	18	F	29	T
8	T	19	F	30	T
9	T	20	F	31	F
10	T	21	T	32	F
11	F	22	F		

F : Complete the following statements

1. LCD stands for.....
2. Screen output is called
3. Printed computer output is called.....
4. Another word for the cursor is
5. The word for each screen dot is.....
6. The word meaning screen clarity is.....
7. A one-color screen is called
8. Hard copy output is produced by a.....
9. Soft copy output is produced on a.....
10. Printers that make physical contact with the paper are said to be....
11. The type of printer that sprays ink onto the paper from nozzles is called...
12. A device whose purpose is to draw graphics output is called a.....
13. Ink-jet and laser are examples of which type of printer?
14. The most common type of screen for a desktop computer is.....
15. The kind of screen display found on laptop computers is called..
16. A clickable small image on a screen is called a(n).....

17.A screen with just one color on a dark background is called....

18.Printer quality can be measured in terms of the number of dots per...

The Answer :

1	liquid crystal display	10	Impact
2	Soft Copy	11	Ink-Jet
3	Hard Copy	12	Plotter
4	Pointer	13	Nonimpact
5	Pixel	14	Cathode Ray Tube (CRT)
6	Resolution	15	liquid crystal display (LCD)
7	Monochrome	16	Icon
8	Printer	17	Monochrome
9	Screen	18	Inch

Chapter (6)
PROCESSING DATA
INTO
INFORMATION

Keywords :

Batch Processing	التشغيل بالمجموعات
Character	حرف
Convenient	ملاءم
Data Base	قاعدة بيانات
Direct file organization	التنظيم المباشر للملف
Display	العرض
Field	حقل
File	ملف
Indexed file organization	التنظيم المفهرس للملف
Key filed	حقل المفتاح
Master file	الملف الرئيسي
Password	كلمة السر
Record	سجل
Redundancy	اسهاب
Sequential file organization	التنظيم المتتابع للملف
Real time processing = Transaction processing	التشغيل المباشر- الفوري-
Unique	وحيد- فريد

A : Complete the following statements; you do not have to rewrite the whole statement in your answer book you may write the statement's number and missing word (s) : Use the Following Format :

Statement's No	The Best Response
----------------	-------------------

- 1- Data is organized into,,, and,
- 2- A is a set of related fields.
- 3- The is the lowest logical unit that can be accessed from a file.
- 4- processing is suitable for routine applications, and..... processing for time - sensitive applications.
- 5- Files are classified by their data permanence into files and files.
- 6- An record can be accessed either sequentially or directly.
- 7- What are three major methods of organization for storing files of data in secondary storage?,, and.....
- 8- What method processes transactions in a group?

- 9- A type of processing that stores records sequentially but also stores indexes used to access records individually is
- 10- Letters , digits, and special symbols such as (? and \$) are called
- 11- A sequential file in order by field is called a (n)
- 12- Each record for a file is comprised of a set of related
- 13- Processing data transactions one at a time is called.....
- 14- Processing data transactions in the order in which they accrue is called
- 15- Using transactions to change a master file is called

The answer :

Statement's No.	The Missing Word(S)
1	Characters, fields, records, files, and databases.
2	Record.
3	Record.
4	Batch - Direct.
5	Transaction - Master.
6	Indexed.
7	Sequential file, direct file, and indexed file.
8	Batch processing.
9	Indexed file processing.
10	Characters.
11	Key.
12	Fields.
13	Transaction processing.
14	Transaction processing.
15	Updating.

B : For each of the following statements, chose the best response. You do not have rewrite The whole statement in your answer book, you may write the statement's number and the best response. Use the following format:

Statement's No	The Best Response
----------------	-------------------

- 1- Processing transactions in groups is called.
 - a- Data transfer.
 - b- Transaction processing.
 - c- Head switching.
 - d- Batch processing.
- 2- A disk pack within a sealed data module is a
 - a- Backup unit.
 - b- Diskette.
 - c- Winchester.
 - d- CD-ROM.
- 3- A magnetized spot represents.
 - a- CPI.
 - b- 0 bit.
 - c- MB
 - d- `1 bit
- 4- A field contains one or more.
 - a- Characters.
 - b- Databases.
 - c- Records
 - d- Files
- 5- Before a sequential file can update the transactions must first be.
 - a- Numbered.
 - b- Sorted.
 - c- Labeled
 - d- Updated
- 6- Hashing, to get an address, is the process of applying a formula to a:
 - a- Key.
 - b- File.
 - c- Record.
 - d- Character.

- 7- Personal computer users may wish to increase the their hard disk storage capacity with.
a- Higher density b- Read-only media.
c- DAT. d- Removable hard disk cartridge.
- 8- A set of related characters is
a- Field. c- File.
b- Database. d- Record.
- 9- Data that is a single letter is a :
a- Record. c- Database.
b- Field. d- Character.
- 10- Which of the following is considered a character.
a- Last name. c- Zip code.
b- Letter of the alphabet. d- Street address.
- 11-The Kind of processing in which data is processed as it occurs is.
a- Batch. c- Transaction.
b- Master. d- Memory.
- 12- A group of related fields makes up a:
a- Data base. c- File.
b- Record. d- Field.
- 13- Which of the following is a name for data transactions processed in groups?
a- Semi processing. c- Batch processing.
b- Optical processing. d- Transaction processing.
- 14- In the organization of data, a collection of related records is a:
a- File. c- Record.
b- Group. d- Character.

15- The process of making changes to a master file is called:

a- Updating.

c- Filing.

b- Erasing.

d- Transacting

The answer :

Statement's No.	The Best Responses	
I	D	Batch processing.
2	C	Winchester.
3	D	1 bit
4	A	Characters.
5	B	Stored.
6	A	Key
7	D	Removable hard disk cartridge.
8	A	Field.
9	D	Character.
10	B	Letter of the alphabet.
11	C	Transaction.
12	B	Record
13	C	Batch processing
14	A	File
15	A	Updating

C : Indicate whether each of the following statements is true (T), or false (F), and justify the false ones. You may organize your answer as follows :

Statement's No	T or F	Incorrect Term	Correct Term
-------------------	--------	-------------------	-----------------

- 1- A record is a set of related files.
- 2- A payroll file contain a field for each employee.
- 3- Files are classified by their data permanence into transaction files and master files.
- 4- Direct processing is a method in which transaction are collected into groups to be processed.
- 5- The field is the lowest logical unit that can be accessed from a file.
- 6- Direct processing is also known as real-time processing
- 7- A data set is a collection of interrelated files stored together with millennium redundancy.
- 8- Time - sharing is a system in which two or more users share a central computer.
- 9- Batch processing processes data in groups.
- 10- A field is a set of related characters.

11- Transaction files and master files are examples of program files.

12- All programs, text, and data. on the disk reside in records.

13- A database is a collection of interrelated records.

14- A file is a set of related records.

15- A record is a set of related fields.

The Answer :

Statement's No	T or F	Incorrect Term	Correct Term
1	F	Files	Fields
2	F	Field	Record
3	T	—	—
4	F	Direct	Batch
5	F	Field	Record
6	T	—	—
7	F	Data set	Database
8	T	—	—
9	T	—	—
10	T	—	—
11	F	Program	Data
12	T	—	—
13	F	Records	Files
14	T	—	—
15	T	—	—

D : For each of the following statements, chose the best response:

- 1. A field contains one or more.....**
 - a. characters**
 - b. databases**
 - c. records**
 - d. files**
- 2. Processing transactions in groups is called.....**
 - a. data transfer**
 - b. transaction processing**
 - c. head switching**
 - d. batch processing**
- 3. Relatively permanent data is contained in.....**
 - a. a field**
 - b. memory**
 - c. a transaction**
 - d. a master file**
- 4. Before a sequential file can be updated, the transactions must first be.....**
 - a. numbered**
 - b. sorted**
 - c. labeled**
 - d. updated**
- 5. Data that is a single letter is a.....**
 - a. record.**
 - b. field.**
 - c. database**
 - d. character**
- 6. A set of related characters is called a.....**
 - a. field**
 - b. file**
 - c. database.**
 - d. record**
- 7. Which of the following is considered a character?**
 - a. last name**
 - b. zip code**
 - c. letter of the alphabet**
 - d. street address**

8. The kind of processing in which data is processed as it occurs is called..... .
a. batch. b. memory
c. transaction. d. master.
9. A group of related fields comprises a
a. database. b. file.
c. field. d. record
10. Processing data in groups is called.....
a. semi-processing c. transaction processing.
b. batch processing. d. optical processing
11. In the organization of data, a collection of related records is a...
a. record b. file.
c. character. d. group
12. The smallest unit of organization for data is the
a. field. b. character.
c. file. d. database
13. Which of these is considered a file of semi permanent data?
a. temporary b. transaction
c. master d. primary
14. A file that contains changes to be made to the master file is the..
a. secondary file. c. auxiliary file
b. temporary file d. transaction file

15. The process of making changes to a master file is called....
 - a. updating
 - b. erasing
 - c. filing
 - d. transacting
16. The kind of transactions that can be used to update a master file are.....
 - a. revisions
 - b. additions.
 - c. deletions.
 - d. all of these.
17. Processing that can obtain data from the computer system in time to be acted on right away is called.....
 - a. batch.
 - b. real-time.
 - c. tape.
 - d. multiple
18. For processing to be real-time it must also be
 - a. online.
 - b. batch.
 - c. optical
 - d. auxiliary
19. A key application of magnetic tape today is.....
 - a. real-time processing.
 - c. direct processing.
 - b. interactive processing
 - d. file backup.
20. The technique of processing transactions one at a time in random order is called.....
 - a. sequential.
 - b. batch.
 - c. group.
 - d. transaction.
21. Records are stored on magnetic tape.....
 - a. independently.
 - c. randomly
 - b. sequentially
 - d. as transactions occur

22. Direct file processing is also called.....
- a. helical processing
 - b. crashing
 - c. batch processing
 - d. direct access
23. The kind of file processing that stores records sequentially but can access them either sequentially or randomly is called....
- a. direct processing.
 - b. indexed processing.
 - c. batch processing.
 - d. tape processing.
24. The ability to read, change, and return a record to its same place on disk is called.....
- a. storage processing
 - b. data transferring.
 - c. batch processing
 - d. updating in place
25. In order for transactions to be processed as they occur, the processing must be.....
- a. online and zone
 - b. real-time and batch.
 - c. batch and online.
 - d. online and real-time.
26. A transaction file to be used for a batch update must be in order by...
- a. last name.
 - b. date of entry.
 - c. a key field.
 - d. none of these.

The Answer

1	D	10	B	19	C
2	D	11	B	20	D
3	D	12	B	21	B
4	B	13	C	22	D
5	D	14	D	23	B
6	A	15	A	24	D
7	C	16	D	25	D
8	C	17	B	26	C
9	D	18	A		

E : Indicate whether each of the following statements is true (T), or false (F),

1. Real-time processing means that a transaction is processed fast enough for the result to come back and be acted upon right away.
2. A field is a set of related records.
3. A transaction file contains records to update the master file.
4. Transaction processing systems are real-time systems.
5. Files to be updated by transaction processing must be in order by a key field.

- 6. A field is a set of related characters.**
- 7. Batch processing is used primarily in business applications where a speedy response is needed.**
- 8. Batch processing processes data in groups.**
- 9. Transaction processing processes data one transaction at a time.**
- 10. Transaction processing can process transactions as they occur.**
- 11. . A file is a set of related records.**
- 12. A record is a set of related fields.**
- 13. A master file contains records that are permanent and can never be changed.**
- 14. A field can be composed of characters such as letters, but not digits or special characters.**
- 15. A record in a personnel file would typically contain fields for several different people.**
- 16. The number of records on a master file may change when the file is updated.**
- 17. A transaction file is used to update a master file.**
- 18. A master file may be updated by adding, revising, or deleting records.**
- 19. An addition transaction is used to create a new records on the master file.**

- 20. A revision transaction can be used to delete a record from the master file.**
- 21. A revision transaction can be used to change a phone number field on a master file record.**
- 22. A deletion transaction is used to remove a record from the master file.**
- 23. Transaction processing requires that transaction records be sorted in order before being used to update the master file.**
- 24. Transaction processing is useful for users who must immediately update a particular master file record.**
- 25. Real-time processing must be online.**
- 26. Real-time processing must be batch processing.**
- 27. Magnetic tape is particularly useful for transaction processing.**
- 28. Since individual disk records can be accessed directly, disk is suited for transaction processing.**
- 29. Using batch processing, a bank clerk could make an inquiry about a customer's computerized banking records and get the result quickly while the customer waits.**
- 30. A key advantage of transaction processing is the immediate updating of master file records.**

31. A computer master file may be updated using batch or transaction processing, but not both.
32. A principal use of magnetic tape today is as a file backup medium.
33. During direct file processing a record on disk may be updated in place.
34. An indexed file stores records in sequential order.
35. In sequential processing, records must be in order by a key.
36. An example of a good record key for a personnel file is the person's name.

The Answer

1	T	13	F	25	T
2	F	14	F	26	F
3	T	15	F	27	F
4	T	16	T	28	T
5	F	17	T	29	F
6	T	18	T	30	T
7	F	19	T	31	F
8	T	20	F	32	T
9	T	21	T	33	T
10	T	22	T	34	T
11	T	23	F	35	T
12	T	24	T	36	F

F : Complete the following statements

- 1. Adding more sectors to the outer tracks of a disk is called....**
- 2. Processing transactions in a group is called....**
- 3. A unique identifier for a record is called.....**
- 4. The smallest unit of raw data is the.....**
- 5. The method of organizing data vertically on a disk pack is the....**
- 6. Three major methods of file organization.....**
- 7. Letters, digits, and special symbols such as ? or # are called....**
- 8. A sequential file is in order by a field called a....**
- 9. Each record for a file is comprised of a set of related.....**
- 10. Processing data transactions one at a time is called...**
- 11. Processing data transactions in the order in which they occur is called.....**
- 12. Using transactions to change a master file is called.....**

- 13. Obtaining data from the computer in time to be acted on right away is called.....**
- 14. A user who is directly connected to the computer is considered to be.....**
- 15. A file is a group of related.....**
- 16. A person's name, address, and telephone number are examples of**
- 17. The kind of file that contains all changes to be made to the master file is the.....**
- 18. A collection of inter-related files stored with minimum redundancy is called a.....**
- 19. The type of processing that stores records sequentially but also stores indexes used to access records individually is called....**
- 20. Reading, changing and returning a record to the disk is called...**
- 21. The semi-permanent data file that can be updated by transactions is called a.....**
- 22. A file is composed of a group of related.....**
- 23. The kind of processing that updates a file whose records are kept in a certain order is**

The Answer

1	zone recording	13	real-time processing
2	batch processing	14	online
3	key	15	records
4	character	16	fields
5	cylinder method	17	transaction file
6	Sequential, direct, indexed sequential	18	database
7	characters	19	indexed file processing
8	key	20	updating in place
9	fields	21	master file
10	transaction processing	22	records
11	transaction processing	23	sequential processing
12	updating		

Chapter (7)

NETWORKING COMPUTER

CONNECTIONS

Key Words

Periodicals	دوريات
appreciably	ممکن تقديره - ممکن إدراکه
inconvenient	غير ملائم
decentralized	لا مركزي
centralized	يتمركز
accommodates	يتسع لـ - يلاءم
pretty	حسن - لطيف
transmission	نقل
presence	حضور
coaxial cables	كابلات متحدة المحور
alterable	تبديل
amplitude	اتساع - وفرة - مدى
acoustic coupler	رابط صوتي
stare net work	الشبكات النجمة
ring net work	الشبكة الدائرية
bus network	شبكة النقل
wide area network (WAN)	شبكة واسعة النطاق
local area network (LAN)	شبكة محلية
host	المضيف
server	الخادم
E- mail	بريد إلكتروني
voice- mail	بريد صوتي
internet	انترنت
intranet	انترانت
Extranet	اكسترانت

A : Complete the following statements; you do not have to rewrite the whole statement in your answer book. You may write the statement's number and missing word (s) : Use the Following Format :

<i>Statement's No</i>	<i>The missing word(s)</i>
-----------------------	----------------------------

- 1- are computer systems that transmit data across telephone lines or cables.
- 2- TCP/ IP stands for.....
- 3- The kind of signal that most telephone lines require is.....
- 4- What device converts a digital signal to an analog signal and vice versa?
- 5- technology allows you to send a copy of an image across telephone lines, where it can be printed out at the other end.
- 6- A (n)..... network links distant commuters and terminals.
- 7- software allows a PC to communicate with a main frame as if it were a terminal.
- 8- The term for computer systems that transmit data over telephone lines:.....
- 9- Another name for information utility:

- 10- What is the term for computer networks that share resources in a limited geographical location?
- 11- To move files from the user's computer to another computer:
- 12- Personal computers and other hardware attached to a LAN are called.....
- 13- A network in which all computers have equal status and share resources:
- 14- ISDN stands for.....
- 15- What hardware device connects two dissimilar networks?.....
- 16- To communicate with a larger computer, a personal computer must use what kind of software?
- 17- Changing a signal from digital to analog is called.
- 18- EDI stands for:
- 19- A set of rules for exchanging electronic data :
- 20- Signals are transmitted to satellites from:.....
- 21- The hardware device that modulates and demodulates is called a (n)
- 22- Software that permits a personal computer to act as a terminal when interacting with larger computers is called.....

- 23- Sending messages from computer to computer is called.....
- 24- Another name for a computer on a local area network is
- 25- The type of communications link that uses line – of – sight transmission to send signals through the atmosphere is
- 26- The type of communications link that sends signals thousands of miles above the earth is
- 27- The acronym LAN stands for
- 28- The general term for using the computer to bring people together for meeting despite geographic barriers is
- 29- The type of transmission that uses a continuous signal is
- 30- Office workers who are in the same building but not particularly nearby, and who want to share a quality printer and licensed software, will probably use what kind of network ?.....
- 31- The acronym EFT stands for
- 32- Sending files from a personal computer to a host computer is called
- 33- The device that performs the functions of both a modem and a fax machine is the

- 34- The transmission type that sends data as distinct on or off pulses is
- 35- A network of geographically distant computers is called a (n)
- 36- A LAN topology that links all nodes together in a circular pattern is called a (n).....
- 37- The type of network likely to be used in an office or a physically close set of buildings is
- 38- A LAN topology that uses a central computer to manage the network is called
- 39- The formal name for e-mail is.....
- 40- A type of LAN topology that has a single line, to which all the network nodes are attached is
- 41- The kind of system in which all hardware, software, and processing are in one location is called.....
- 42- The central computer to which terminals and distant computers are attached in a WAN is called the
- 43- A type of modem that is outside the computer is called.....
- 44- The general term for a computer system that transmits data over communications lines is
- 45- Data is sent and received via satellite transmission using

The answer :

Statement's No.	The Missing Word (s)
1	data communications systems
2	Transmission control protocol/ internet protocol
3	analog
4	a modem
5	facsimiles (fax)
6	wide area network (WAN)
7	terminal emulation
8	data communications systems
9	online service
10	local area network
11	upload
12	Nodes
13	Peer-to- Peer
14	integrated services digital Network
15	gateway
16	terminal emulation software
17	modulation
18	electronic data interchange
19	protocol
20	earth stations
21	Modem

22	emulation software
23	electronic mail (e-mail)
24	node
25	microwave transmission
26	satellite transmission
27	local area network
28	teleconferencing
29	analog
30	local area network (LAN)
31	electronic funds transfer
32	uploading
33	fax modem
34	digital
35	wide area network (WAN)
36	ring network
37	local area network (LAN)
38	star network
39	electronic mail
40	bus
41	centralized data processing
42	host
43	external
44	data communications system
45	earth stations

B: For each of the following statements, chose the best response. You do not have rewrite the whole statement in your answer book, you may write the statement's number and the best response. Use the following format:

<i>Statement's No</i>	<i>The best response</i>
-----------------------	--------------------------

- 1- is the protocol that governs communications on the internet.**
a) EFT b) TCP/ IP
c) MAN d) EDI
- 2- Devices that send and receive satellite signals are called**
a) Modems b) earth stations
c) Tokens d) servers
- 3- Housing all hardware, software, storage, and processing in one site location is called**
a) time-sharing b) a distributed system
c) centralized d) a host computer
- 4. The process of converting from analog to digital is called**
a) modulation b) telecommuting
c) line switching d) demodulation
- 5. The arrangement in which most of the processing is done by the server is known as**
a) simplex transmission b) a file server
c) electronic data interchange
d) a client / server relationship

6. Two or more computers connected to a hub computer is a
a) ring network b) CSMA
c) node d) star network
7. The physical layout of a LAN is called the
a) topology b) link
c) contention d) switch
8. The network type in which all computers have equal status is called
a) a communications link b) WAN
c) peer- to- peer d) a gateway
9. A network that connects all nodes with a single cable is..
a) star b) switched
c) ring d) bus
10. Signals produced by a computer to be sent over standard phone lines must be converted to.....
a) modems b) digital signals
c) analog signals d) microwaves
11. Microwave transmission, coaxial cables, and fiber optics are examples of
a) modems b) routers
c) communication media d) ring networks
12. A network of geographically distant computers and terminals is called a (n).....
a) bus b) ATM
c) WAN d) LAN

13. Graphics and other paperwork can be transmitted directly by using
a) CSNA/ CD b) facsimile
c) token passing d) transponder
14. An internal computer device that performs both modem and facsimile functions is called a.....
a) node b) cable
c) ring d) fax modem
15. A general term that refers to connecting two or more computers and their resources via communications equipment is
a) network b) topology
c) token d) workstation
16. Another name for electronic mail is
a) fax mail. b) e- mail
c) voice mail d) client mail
17. In which kind of network do all computes have equal status and share files and peripheral devices ?
a) bus b) WAN
c) star d) peer- to- peer
18. The kind of network most likely for computers that are geographically widely dispersed is
a) WAN b) LAN
c) peer- to – peer d) ring
19. The network topology that uses a hub computer to manage the network is
a) star b) ring
c) peer- to- peer d) bus

20. Retrieving files from a host computer is called
- a) extraction.
 - b) uploading
 - c) downloading
 - d) faxing
21. Sending files to a host computer is called.....
- a) extraction.
 - b) uploading
 - c) downloading
 - d) faxing
22. The special software that enables a personal computer to act as a terminal is called.....
- a) Transponding
 - b) carrier
 - c) emulation
 - d) token
23. The worldwide loose collection of networks is called
- a) Ethernet
 - b) America Online
 - c) the internet
 - d) the Microsoft Network
24. The general term describing meeting participants communicating via computers is called.....
- a) Teleconferencing
 - b) voice mail
 - c) Telecommuting
 - d) switching
25. The placement of all hardware, software, storage, and processing in a single location is called.....
- a) centralized data processing
 - b) localized data processing
 - c) distributed data processing
 - d) front- end processing
26. Which of theses is a type of communication link ?
- a) coaxial cables
 - b) WAN
 - c) fax
 - d) direct-connect modem

27. The network topology that has a single line to which all the network nodes are attached is called
a) star. b) bus
c) ring d) gateway
28. Paying for goods and services by having funds transferred from bank accounts using computer technology is called.....
a) electronic mail. b) voice mail
c) electronic funds transfer
d) electronic data interchange
29. Sending messages from one computer to another is called.....
a) interfacing b) electronic mail
c) serving d) videoconferencing
30. A device that facilitates transmission and reception of computer generated text and graphics is a (n)
a) token ring b) optical wave
c) video board d) fax modem
31. The transmission that sends data as distinct pulses, either on or off is called.....
a) binary b) analog
c) digital d) data
32. The data transmission method that uses a continuous electrical signal in the form of a wave is called.....
a) binary b) analog
c) digital d) data

33. Conversion of a digital signal to an analog signal is called.....
a) modulation b) switching
c) transference d) demodulation
34. A device that can convert a digital signal to an analog signal, or an analog signal to a digital is called a
a) digitizer b) demodulator
c) modem d) modulator
35. In a network a central computer is called the....
a) star b) node
c) host d) ring
36. A personal computer attached to a LAN is referred to as a
a) branch b) host
c) node d) gateway
37. The network topology that connects each device to a central computer is
a) star b) ring
c) bus d) WAN
38. The network topology that connects nodes in a circular manner :
a) star b) bus
c) ring d) WAN
39. In satellite transmission, signals are sent and received using
a) earth station b) bridges
c) gateways d) switches

40. A network arrangement in which most of the processing is done by the computer that controls the network is called.....
- a) file server.
 - b) teleconferencing
 - c) Token Ring
 - d) client / server
41. A set of rules for exchanging data between a terminal and a computer or between two computers is called a (n).....
- a) gateway
 - b) bandwidth
 - c) protocol
 - d) emulation
42. The internet protocol is.....
- a) TCP/ IP
 - b) LAN
 - c) Ethernet
 - d) WAN
43. The type of modem that is on a board that fits inside the computer is described as
- a) a PC card
 - b) internal
 - c) a front- end processor
 - d) external
44. The physical medium used to transmit data over a network is called a
- a) switch
 - b) link
 - c) node
 - d) bandwidth
45. In a client/ server network arrangement, the computer that controls the network and has the hard disk and probably the best printer is the
- a) bridge
 - b) server
 - c) client
 - d) node

46. The technology that lets businesses send business forms electronically is called.....
a) electronic data interchange b) voice mail
c) emulation software d) file transfer software
47. Receiving a file from another computer is called
a) downloading b) bridging
c) Transponding d) linking
48. Demodulation converts a signal from.....
a) digital to synchronous b) digital to analog
c) analog to digital d) analog to baud
49. The machine usually on a bank's wall, that dispenses cash is called a (n).....
a) server b) host
c) station d) ATM

The Answer:

1	B	18	A	35	C
2	B	19	A	36	C
3	C	20	C	37	A
4	D	21	B	38	C
5	D	22	C	39	A
6	D	23	C	40	D
7	A	24	A	41	C
8	C	25	A	42	A
9	D	26	A	43	B
10	C	27	B	44	B
11	C	28	C	45	B
12	C	29	B	46	A
13	B	30	D	47	A
14	D	31	C	48	C
15	A	32	B	49	D
16	B	33	A		
17	D	34	C		

C: Indicate whether each of the following statements is true (T), or false (F), and justify the false ones. You may organize your answer as follows:

Statement's No	T or F	Incorrect Term	Correct Term
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- 1- A data communications system transmits data over communications links.
- 2- A computer network uses communications equipment to link computers and their resources.
- 3- Earth stations are components of satellite communication links.
- 4- Coaxial cables are often used underground or under sea.
- 5- Fiber optics transmission sends data through glass fibers, using light beams.
- 6- Analog transmission uses a continuous signal.
- 7- Common communications media such as the telephone usually use analog transmission.
- 8- Digital signals must be modulated before transmission over analog lines.
- 9- A personal computer modem may be internal or external.

- 10- If a document to be faxed is available only on paper, it must be scanned into the computer before being sent using a fax modem or else be sent using a separate fax machine.**
- 11- A fax modem can both transmit and receive faxes.**
- 12- Transferring files from a large central computer to a personal computer is called updating.**
- 13- Most computer systems today use only centralized data processing.**
- 14- Transferring files from a personal computer to a large central computer is called downloading.**
- 15- LANs are used to link computers that are geographically distant.**
- 16- The central computer of a star network is called a hub.**
- 17- An e-mail user can send the same message simultaneously to several recipients.**
- 18- An advantage of using a WAN is that users can share a local resource such as a quality printer.**
- 19- Data that is modulated at the sending end must be demodulated at the receiving end.**
- 20- Many communications devices today are analog, in which case data modulation is required.**

- 21- A direct- connect modem is connected to the telephone b means of a telephone jack.**
- 22- The basic hardware components of a data communications system are sending and receiving devices and a communications link.**
- 23- Another name for e-mail is electronic data interchange.**
- 24- The internet uses a protocol called TCP/IP**
- 25- A protocol is a set of rules for transmitting data**
- 26- A PC card modem can be inserted in a slot on a laptop computer.**
- 27- Electronic data interchange allows businesses to transmit common data forms electronically.**
- 28- A personal computer that wishes to communicate with a mainframe must use terminal emulation software.**
- 29- A file server transmits an entire file to a node, which then does its own processing.**

The answer

Statement's No.	T or F	Incorrect Term	Correct Term
1	T	—	—
2	T	—	—
3	T	—	—
4	T	—	—
5	T	—	—
6	T	—	—
7	T	—	—
8	T	—	—
9	T	—	—
10	T	—	—
11	T	—	—
12	F	up loading	down loading
13	F	centralized	decolorized
14	F	down loading	up loading
15	F	LAN	WAN
16	T	—	—
17	T	—	—
18	F	WAN	LAN
19	T	—	—
20	T	—	—
21	T	—	—
22	T	—	—
23	F	electronic- data interchange	electronic mail
24	T	—	—
25	T	—	—
26	T	—	—
27	T	—	—
28	T	—	—
29	T	—	—

D: For each of the following statements, chose the best response.

- 1 The action of moving a page up or down on the screen is called**
a. scrolling b. linking
c. lurking d. framing
- 2 The software on a user's computer that employs a graphical interface to access the Internet is called.....**
a. URL b. FTP
c. ISP d. a browser
- 3 A network of two or more intranets is called a(n)....**
a. extranet b. VPN
c. portal d. DSL
- 4 An internal computer device that performs both modem and facsimile functions is called a.....**
a. node. b. cable.
c. ring d. fax modem
- 5 A general term that refers to connecting two or more computers and their resources via communications equipment is.....**
a. network. b. topology
c. token. d. workstation
- 6 Another name for electronic mail is.....**
a. fax mail. b. e-mail.
c. voice mail d. client mail.

- 13** The general term describing meeting participants communicating via computers is called.....
a. teleconferencing. b. voice mail.
c. telecommuting d. switching
- 14** Which of these is a type of communication link?
a. coaxial cable b. WAN
c. fax d. direct-connect modem
- 15** Meetings using computers and cameras are called.....
a. videoconferencing. b. EFT
c. facsimile d. star network
- 16** The general term that means the use of technology to help achieve the goals of the office is.....
a. EFT. b. office automation.
c. gateway. d. videoconferencing.
- 17** The network topology that has a single line, to which all the network nodes are attached is called
a. star. b. bus.
c. ring. d. gateway.
- 18** Paying for goods and services by having funds transferred from bank accounts using computer technology is called
a. electronic mail. c. electronic funds transfer
b. voice mail d. electronic data interchange
- 19** Sending messages from one computer to another is called.....

- a. interfacing. b. electronic mail.
c. serving d. videoconferencing.
- 20** Teleconferencing with screens showing participants is called.....
a. personnel conferencing. c. videoconferencing.
b. camera conferencing. d. video communications
- 21** A device that facilitates transmission and reception of computer-generated text and graphics is a
a. token ring. b. optical wave.
c. video board. d. fax modem
- 22** The data transmission method that uses a continuous electrical signal in the form of a wave is called.....
a. binary. b. analog.
c. digital d. data.
- 23** Conversion of a digital signal to an analog signal is called.....
a. modulation. b. switching.
c. transference d. demodulation
- 24** A device that can convert a digital signal to an analog signal, or an analog signal to a digital is called a
a. digitizer. b. demodulator.
c. modem. d. modulator.
- 25** In a network a central computer is called the.....
a. star. b. node.
c. host. d. ring

- 26 A personal computer attached to a LAN is referred to as a.....
a. branch. b. host.
c. node. d. gateway
- 27 The network topology that connects each device to a central computer is.....
a. star. b. ring.
c. bus d. WAN.
- 28 The network topology that connects nodes in a circular manner:
a. star b. bus c. ring d. WAN
- 29 A network arrangement in which most of the processing is done by the computer that controls the network is called.....
a. file server. c. Token Ring.
b. teleconferencing. d. client/server
- 30 Software to navigate the Internet is called a(n)
a. ring. b. browser. c. emulator. d. utility
- 31 A set of rules for exchanging data between a terminal and a computer or between two computers is called a(n)
a. gateway. b. bandwidth
c. protocol d. emulation
- 32 The Internet protocol is.....
a. TCP/IP. b. LAN. c. Ethernet. d. WAN.

- 33** In a client/server network arrangement, the computer that controls the network and has the hard disk and probably the best printer is the ...
a. bridge. b. server. c. client d. node.
- 34** The technology that lets businesses send business forms electronically is called.....
a. electric data interchange. c. emulation software
b. voice mail. d. file transfer software
- 35** ISDN stands for.....
a. Internet Service Data Network.
b. Integrated Services Digital Network
c. Internet Server Digital Network.
d. Integrated System Demodulation Node
- 36** Receiving a file from another computer is called
a. Downloading. b. bridging
c. transponding d. linking
- 37** Demodulation converts a signal from.....
a. digital to synchronous. c. analog to digital
b. digital to analog. d. analog to baud
- 38** The machine, usually on a bank's wall, that dispenses cash is called a(n)..
a. server. b .host c. station d.ATM.
- 39** The graphical interface software that can be used to access the internet from the user's computer is called a(n).....

- a. applet. b. browser
c. hypertext. d. intranet.

- 40 An Internet-like network that is internal to an organization such as a business is called a(n).....
a. intranet. b. hypertext.
c. frame d. protocol

The Answer

1	A	15	A	29	D
2	D	16	B	30	B
3	A	17	B	31	C
4	D	18	C	32	A
5	A	19	B	33	B
6	B	20	C	34	A
7	D	21	D	35	C
8	A	22	B	36	A
9	A	23	A	37	C
10	C	24	C	38	D
11	B	25	C	39	B
12	C	26	C	40	A
13	A	27	A		
14	A	28	C		

E: Indicate whether each of the following statements is true (T), or false (F),

- 1. An intranet is a public network and an extranet is a private network.**
- 2. Multicasting sends one copy of each file to every user on the network.**
- 3. A cable modem is slower than a traditional modem.**
- 4. Browser software is kept on the server computer.**
- 5. In an URL, the domain name is the address of the ISP.**
- 6. TCP/IP is the standard Internet protocol.**
- 7. Most LAN systems use the centralized data processing approach.**
- 8. A data communications system transmits data over communications links.**
- 9. Modems are no longer needed in most modern data communications systems.**
- 10. A personal computer user who wants to use an online service will need two modems, one to send data and one to receive data.**
- 11. Analog transmission sends data as distinct pulses.**
- 12. A computer network uses communications equipment to link computers and their resources.**

- 13. A twisted pair is another name for wire pairs.**
- 14. A transponder receives data from one LAN computer and sends it on to another.**
- 15. Demodulation converts digital signals to analog signals.**
- 16. Analog transmission uses a continuous signal.**
- 17. Common communications media such as the telephone usually use analog transmission.**
- 18. Digital signals must be modulated before transmission.**
- 19. A personal computer modem may be internal or external.**
- 20. A direct-connect modem connects the computer directly to the printer.**
- 21. The most common name for the use of technology in the office is *office technology*.**
- 22. The transmission speed of a modem is measured in terms of bytes per second.**
- 23. Working at home on a computer, as a substitution for working at the office, is known as computer conferencing.**
- 24. A fax modem can both transmit and receive faxes.**
- 25. The protocol of the Internet is ISDN.**

- 26. Transferring files from a large central computer to a personal computer is called downloading.**
- 27. Transferring files from a personal computer to a large central computer is called uploading.**
- 28. LANs are used to link computers that are geographically distant.**
- 29. The central computer of a star network is called a hub.**
- 30. An e-mail user could send the same message simultaneously to several recipients.**
- 31. An advantage of using a WAN is that users can share a local resource such as a quality printer.**
- 32. Data that is modulated at the sending end must be demodulated at the receiving end.**
- 33. Most communications devices today are analog, so data modulation is usually required.**
- 34. A direct-connect modem is connected to the telephone by means of a telephone jack.**
- 35. Another name for e-mail is electronic data interchange.**
- 36. The Internet uses a protocol called TCP/IP.**
- 37. A protocol is a set of rules for transmitting data.**

- 38. In a client/server network arrangement, the client does all its own processing.**
- 39. A computer that relieves a large computer of its communications chores is called a server.**
- 40. An intranet is a combination of two or more extranets.**
- 41. An intranet is within a company or organization.**
- 42. The development of intranets has been severely limited by Internet technology.**

The Answer

1	f	15	f	29	t
2	f	16	t	30	t
3	f	17	t	31	f
4	f	18	t	32	t
5	t	19	t	33	t
6	t	20	f	34	t
7	f	21	f	35	f
8	t	22	f	36	t
9	f	23	f	37	t
10	f	24	t	38	f
11	f	25	f	39	f
12	t	26	t	40	f
13	t	27	t	41	t
14	f	28	f	42	f

F : Complete the following statements

- 1. A private Internet-like network internal to a certain company is called a(n).....**
- 2. A network of two or more intranets is called.....**
- 3. The short name for electronic commerce is.....**
- 4. The hardware device that modulates and demodulates is called a..**
- 5. Sending messages from computer to computer is called..**
- 6. Another name for a computer on a local area network is....**
- 7. The acronym LAN stands for.....**
- 8. The type of transmission that uses a continuous signal is....**
- 9. Office workers who are in the same building but not particularly nearby, and who want to share a quality printer and licensed software, will probably use what kind of network.**
- 10. The acronym EFT stands for.....**
- 11. Sending files from a personal computer to a host computer is called ...**
- 12. The device that performs the functions of both a modem and a fax machine is the.....**

13. A network of geographically distant computers is called a...
14. A LAN topology that links all nodes together in a circular pattern is called a....
15. Another name for wire pairs is.....
16. A LAN topology that uses a central computer to manage the network is called.....
17. A type of LAN topology that has a single line, to which all the network nodes are attached, is.....
18. The central computer to which terminals and distant computers are attached in a WAN is called the.....
19. A network whose computers have equal status and share files and devices is called.....
20. TCP/IP stands for.....
21. A combination of two or more intranets is called a(n)
22. A private Internet-like network that is internal to a company is called a (n).....
23. WWW stands for.....
24. A user can move up and down a web page using a technique called...

The Answer

1	intranet	13	wide area network (WAN)
2	extranet	14	ring network
3	e-commerce	15	twisted pairs
4	modem	16	star network
5	electronic mail (e-mail)	17	bus
6	node	18	host
7	local area network	19	peer-to-peer
8	analog	20	Transmission Control Protocol/ Internet Protocol
9	local area network (LAN)	21	extranet
10	electronic funds transfer	22	intranet
11	uploading	23	World Wide Web
12	fax modem		scrolling

Chapter (8)
COMPUTER SOFTWARE
APPLICATIONS SOFTWARE
AND
OPERATING SYSTEMS

Key words:

System software	برامج نظم
Application software	برامج تطبيقات
Manufacture	الصانع
Suppliers	المورد
Operating system	برامج مراقبة
Utility programs	برامج دعم النظام
Language translators	برامج الترجمة – تطوير النظام
Formatting	تهيئة – تجهيز
Modem	موديم
Recalculation	إعادة حساب
Bar	أعمدة
Packaged	حزم
Word processing	برامج معالجة الكلمات
Data base	قواعد البيانات
Graphics	الخرائط
Integrated	متكاملة
Revise	استرجاع
Document	مستند
Columns	أعمدة
Rows	صفوف
Interrelated	مترابطة
Pie charts	خرائط دائرية
Spreadsheet	الجدول الالكتروني
Routine	روتينية

A: Complete the following statements; you do not have to rewrite the whole statement in your answer book. You may write the statement's number and missing word (s): Use the following format:

Statement's No.	The Missing Word (s)
-----------------	----------------------

- 1- A computer software comes in two forms and
- 2- System software can be divided into the following categories , and
- 3- perform common tasks as copying the contents of one disk to another and formatting a new disk.
- 4- The two types of applications software are, and
- 5- General purpose applications software is also referred to as
- 6- lets you create, edit, format, revise, store and print text and graphics in one document.
- 7- is made up of columns and rows of numbers.
- 8- Examples of general purpose application software are ,..... and
- 9- is made up of a group of computer programs.
- 10- , and are examples of specific purpose software.

- 11- There are two forms of graphics and
- 12- The most common analytical graphic forms are, and
- 13- To use communication software the user needs a Connected to a in this computer.

The Answer:

Statement's No.	The missing words (s)
1	System software, application software
2	Operating systems, utility programs and language translation
3	Utility programs
4	General purposes, specific purposes
5	Packaged software
6	Word processing
7	Electronic spreadsheet
8	Word processing, Data base, graphics, and communications
9	software
10	Pay roll, sales analysis
11	Analytical and presentation
12	Bar, line, and pie.
13	Telephone line, modem

B: Indicate whether each of the following statements is true (T), or false (F), and justify the false ones. You may organize your answer as follows:

Statement's No.	T Or F	Incorrect Term	Correct Term
--------------------	--------	-------------------	-----------------

- 1- A computer software comes in two forms operating systems, and utility programs.
- 2- The two types of applications software are system software and language translation.
- 3- Examples of general purpose application software are payroll and sales analysis.
- 4- Hardware is made up of a group of computer programs.
- 5- Payroll and sales analysis are examples of specific purpose software.
- 6- There are two forms of graphics bar and line.
- 7- The most common analytical graphic forms are bar, line and pie.
- 8- To use communication software the user needs a telephone line connected to a modem in this computer.
- 9- General purpose applications software is also referred to as packaged software.
- 10- Word processing is made up of columns and rows of numbers.

The Answer:

Statement's No.	T Or F	Incorrect term	Correct term
1	F	Operating systems and utility programs	System software and application software
2	F	System software and language translation	General purpose and specific purpose
3	F	General purpose	specific purpose
4	F	Hardware	Software
5	T	-	-
6	F	Bar and Line	Analytical and presentation
7	T	-	-
8	T	-	-
9	T	-	-
10	F	Word processing	Spread sheet

C : For each of the following statements, chose the best response:

1. An operating system is a(n)
 - a. set of users
 - b. set of programs
 - c. application
 - d. supervisor program
2. Step-by-step instructions that run the computer is called ...
 - a. hardware
 - b. CPUs
 - c. documents
 - d. programs
3. CIS stands for.....
 - a. Computer Internet System
 - b. Commercial Internet System
 - c. Collaborative Information Systems
 - d. Computer Information Systems
4. The underlying software is called.....
 - a. applications
 - b. the operating
 - c. groupware
 - d. shareware system
5. Which of the following terms is not a description of certain software?
 - a. custom
 - b. freeware
 - c. download
 - d. collaborative
6. Software written especially for a group of like businesses is called.....
 - a. freeware
 - b. word processing
 - c. shareware
 - d. vertical market software
7. Loading the operating system into the memory of a personal computer is called...

- a. booting b. applying
- c. supervising d. graphing

8. Software that allows the production of professional newsletters and reports is called

- a. database c. spreadsheets management
- b. groupware d. desktop publishing

9. The type of software that can store, update, manipulate, and retrieve data is called

- a. desktop publishing c. database management
- b. spreadsheet d. graphics

10. Another name for available-for-purchase software is

- a. secondary software c. systems software
- b. packaged software d. peripheral software

11. Another name for software is

- a. network. b. programs.
- c. hardware. d storage

12. Software used to access the Internet is

- a. a browser. c. systems software
- b. vertical software. d. word processing

13. A subset of systems software is

- a. word processing. c. spreadsheets
- b. the operating system d. custom software

14. Moving files from another computer to your own computer is called

- a. downloading. b. merging.
- c. browsing. d. collaborating

15. Packaged software usually includes instruction manuals, which are referred to as.....
a. documentation. c. collaborative material.
b. programs. d. custom software.
16. The most widely used task-oriented software is
a. spreadsheets. c. database management
b. word processing. d. graphics
17. Task-oriented software that combines graphics with text to produce professional-looking newsletters, reports, and brochures is called
a. word processing. c. spreadsheets.
b. database management. d. desktop publishing
18. Task-oriented software that manages data in rows and columns is called
a. Word processing. c. spreadsheets
b. database management. d. desktop publishing.
19. Task-oriented software that helps keep records about collections of interrelated facts is called
a. Word processing. c. spreadsheets
b. database management. d. desktop publishing.
20. Task-oriented software that provides pictorial representations of data is called.....
a. graphics. c. spreadsheets
b. database management. d. desktop publishing.
21. Software that is specifically tailored for user needs is called.....

- a. commercial software. c. task-oriented software
 - b. packaged software. d. custom software.
22. The underlying software found on all computers is.....
- a. database management. c. task-oriented software.
 - b. the operating system. d. custom software.
23. The task-oriented software that can help users spot trends quickly is.....
- a. word processing. c. desktop publishing.
 - b. communications. d. graphics.
24. Another name for packaged software is.....
- a. commercial software. c. operating system.
 - b. system software. d. custom software
25. Which is not a typical type of task that can be accomplished with an operating system command?
- a. write a memo b. format a disk
 - c. copy a file d. erase a file
26. Icons and menus encourage interaction with a
- a. keyboard b. mouse.
 - c. queue. d. prompt.
27. A set of programs that permits the computer to control and manage its own resources is called a(n)
- a. controller. b. operating system.
 - c. manager. d. environment.

28. A colorful graphics user interface that eases access to the operating system is.....
- a. MS-DOS.
 - b. Windows.
 - c. DOS.
 - d. all of these.
29. Icons and menus encourage interaction with a
- a. keyboard.
 - b. mouse.
 - c. queue.
 - d. prompt.
30. A set of programs that permits the computer to control and manage its own resources is called a(n).....
- a. operating system.
 - b. controller
 - c. manager.
 - d. environment
31. A colorful graphics user interface that eases access to the operating system is.....
- a. MS-DOS.
 - b. Windows.
 - c. DOS.
 - d. all of these.
32. The acronym for a graphical interface is.....
- a. GUI.
 - b. DOS.
 - c. MS-DOS.
 - d. CPU
33. Operating systems for large computers permit concurrent running of many unrelated programs by using.....
- a. multiprogramming.
 - b. operating environment.
 - c. a shell.
 - d. service programs.
34. Which is not one of the three main functions of an operating system?.....
- a. manage the computer's resources
 - b. establish a user interface

- c. execute and provide services for applications software
- d. provide e-mail services

35. Another name for service programs is

- a. systems.
- b. utilities.
- c. managers.
- d. schedulers.

36. When a computer has more than one central processing unit and can thus run multiple programs simultaneously, this is called.....

- a. multiprogramming.
- b. an operating environment.
- c. time-sharing.
- d. multiprocessing.

The Answer

1	B	13	B	25	A
2	D	14	A	26	B
3	D	15	A	27	B
4	B	16	B	28	B
5	C	17	D	29	B
6	D	18	C	30	A
7	A	19	B	31	B
8	D	20	A	32	A
9	C	21	D	33	A
10	B	22	B	34	D
11	B	23	D	35	B
12	A	24	A	36	D

D: Indicate whether each of the following statements is true (T), or false (F),

- 1. A browser is software used to access the Internet**
- 2. The most important program in an operating system is the supervisor program.**
- 3. The operating system is an example of applications software.**
- 4. Windows uses a graphical interface.**
- 5. Custom software is specially tailored to user needs.**
- 6. Word processing is a type of task-oriented software.**
- 7. Desktop publishing software is used to manage numbers in columns and rows.**
- 8. The underlying software found on all computers is applications software.**
- 9. Word processing software can be used to create, edit, format, store, and print text.**
- 10. Graphics software is used only by business people, to make charts and graphs.**
- 11. The instructions that tell a computer how to process the data are called programs or software.**
- 12. Most packaged software is applications software.**
- 13. The manual that comes with packaged software are called documentation.**

- 14. Graphics are the most widely used personal computer software.**
- 15. Desktop publishing lets users produce printed materials that combine graphics and text.**
- 16. Database management software can store data, update it, manipulate it, and create a variety of reports.**
- 17. Task oriented software must be purchased in a store.**
- 18. An example of task-oriented software is the operating system.**
- 19. Desktop publishing is preferable to word processing for high-level publishing needs.**
- 20. Spreadsheet software automatically recalculates results when a number in the spreadsheet is changed.**
- 21. The operating system serves as an intermediary between applications software and the hardware.**
- 22. Database systems manage files of interrelated data.**
- 23. The most widely-used applications software is the operating system.**
- 24. Software documentation may come on disk instead of, or in addition to, manuals.**
- 25. Booting refers to moving the operating system from memory to disk storage.**

- 26. Although operating systems for different computers may be different, the basic functions all operating systems are similar.**
- 27. If a computer has a hard disk drive, the operating system will be loaded into memory from the hard disk drive when the computer is turned on.**
- 28. Multiprogramming permits running several programs in the same time frame.**
- 29. Multiprogramming permits several unrelated programs to run simultaneously.**
- 30. Time-sharing is a special case of multiprocessing.**
- 31. An operating system has both hardware and software components.**
- 32. In multiprocessing, more than one program can run simultaneously.**
- 33. An icon is an on-screen picture, representing a command, to which a user can point and click with a mouse.**
- 34. GUI, which stands for gradual user introduction, helps users learn MS-DOS.**
- 35. The operating system is a subset of the system software.**
- 36. A graphical user interface uses on-screen prompts such as >.**

The Answer

1	T	13	T	25	F
2	T	14	F	26	T
3	F	15	T	27	T
4	T	16	T	28	T
5	T	17	F	29	F
6	T	18	F	30	F
7	F	19	T	31	F
8	F	20	T	32	T
9	T	21	T	33	T
10	F	22	T	34	F
11	T	23	F	35	T
12	T	24	T	36	F

E : Complete the following statements

- 1. What kind of software presents numbers in columns and rows?....**
- 2. The general name for software that can be used to solve a problem or perform a task is.....**
- 3. Software written for a group of like businesses is called.....**
- 4. The underlying software found on all computers is the.....**
- 5. The instructions that tell a computer what to do are called.....**
- 6. Software used to access the Internet is called a.....**
- 7. Since it is for sale, packaged software is also called.....**
- 8. The process of moving files from another computer to your own computer is called.....**
- 9. Another name for commercial software is.....**
- 10. A person who plans and designs computer systems is a.....**
- 11. Software used to manage data in columns and rows is called.....**
- 12. Software that specializes in producing output combining text and graphics is called**

13. Software whose main purpose is to let a user create and edit text is called...
14. Software that can be used to make maps and charts is called.....
15. Software that lets a user link up with other computers via phone system or some other means is called
16. Software specifically tailored to user needs is called.....
17. The kind of software that solves a particular problem or performs a particular type of task is called.....
18. The workers who write software are called.....
19. The workers who monitor large computers and keep peripheral equipment going are called.....
20. serves as an intermediary between applications software and the hardware.
21. GUI stands for.....
22. A set of programs that allows a computer to control and manage its own resources is called a(n).....
23. Loading the operating system from disk to memory is called.....
24. DOS stands for.....

25. Another name for a service program is.....

26. The operating system is a subset of.....

The Answer

1	spreadsheet	14	graphics
2	applications software	15	communications
3	vertical market software	16	custom software
4	operating system	17	applications software
5	software (or programs)	18	programmers
6	browser	19	computer operators
7	commercial software	20	The operating system
8	downloading	21	graphical user interface
9	packaged software	22	operating system
10	systems analyst	23	booting
11	spreadsheet	24	disk operating system
12	desktop publishing	25	utility
13	word processing	26	system software

Chapter 9
PROGRAMMING CONCEPTS
AND
DESIGN TECHNIQUES

Key Words:

Application Software	برنامج تطبيقات
Assembly Language	لغة التجميع
Compiler Program	برنامج المترجم
Data base Maintenance	صيانة قواعد البيانات
Data base Management System (DML)	نظم إدارة قواعد البيانات
Data Dictionary	قاموس البيانات
Data Manipulation Language (DML)	لغة معالجة البيانات
Documenting	توثيق
Electronic Spreadsheet program	برنامج الجداول الإلكترونية
File Conversion	تحويل الملفات
Flow - Chart	خريطة
Graphics Programs	برنامج الرسوم البيانية
Hierarchy	هرمية
High Level Language	لغات عالية المستوى
Loop	مجموعة تعليمات متصلة يتكرر تنفيذها
Low – Level Language	لغات منخفضة المستوى
Machine Languages	لغة الماكينة
Network Model	نموذج شبكي
Object - oriented language	لغة ذات هدف
Operating system (OS)	نظم التشغيل
Procedure- oriented language	لغة البرمجة الإجرائية

Programming language translators	مترجم لغات البرمجة
Pseudo code	طريقة للتعبير عن منطق البرنامج باستخدام جمل لغوية
Query Language	لغة الاستفسار - الاستعلام
Relation Model	نموذج ذو علاقات ترابطية
Service programmers	برنامج الخدمات
Source Program	برنامج المصدر
Structure Chart	الخرائط الهيكلية
Structured Query Language(SQL)	لغات تتبع منهج أو خطوات متتالية لحل المشكلة
Symbols	رموز
System control programs	برنامج مراقبة النظام
System Development programs	برنامج تطوير النظام
System software	برنامج النظام
System support programs	برنامج دعم النظام
Utility programs	برنامج المنفعة - الدعم
Word processing program	برنامج معالجة الكلمات

A : Complete the following statement; you do not have to rewrite the whole statement in your answer book .You may Write the statement's number and missing word(s): use the following format:

Statement's No.	The missing word(s)
1-	List in order the five steps of program development:.....,.....,.....and.....
2-	Programmers use a variety of..... to Communicate instructions to the computer.
3-	A non executable language used to plan computer solutions to problems is called.....
4-	A pictorial representation of a step-by-step solution of the program is a(n).....
5-	The.....chart illustrates the structure of a program by depicting its part as modules.
6-	The two basic types of flowcharts areand.....
7-programs are easier to read and debug.
8-show program logic with pictures rather than with Words.
9-	Pseudo code is easier to maintain than a
10-represents the logic in program-like Statements written in plain English.
11 -	Ais a graphic form of the steps necessary to solve a problem.

The Answer

Statement's No.	The Missing Word(s)
1	Defining the program, Design the program logic coding the program, testing the program, and documenting the program.
2	Programming language.
3	Pseudo code.
4	Flow chart.
5	Structure.
6	System and program.
7	Structured
8	Flow charts.
9	Flow chart.
10	Pseudo code.
11	Flow chart.

B: For each the following statements choose the best response. You do not have to rewrite the whole statement in your answer book, you may write the statement's number and the best response. Use the following format:

Statement's No.	The Best Response
-----------------	-------------------

- 1- The first step in the development of a program is.
 - a) Design the program logic c) Testing the program
 - b) Defining the problem d) Documenting the program

- 2- During the development of program, drawing a flowchart is a means to:
 - a) Design the program logic c) Code the program
 - b) Define the problem d) Analyze the program

- 3- An English language that one can use as a program design tools is?
 - a) BASIC b) PL/1
 - c) Pseudo code d) Pascal

- 4- In preparing a program, desk-cheating and translating are Examples of?
 - a) Coding b) Testing
 - c) Planning d) Documenting.

- 5- Comments in the program itself are part of?
 - a) Compiling c) Translating
 - b) Linking d) Documenting.

- 6- Specifying the kind of input, processing, and output required for a program occurs when:

- a) Design the program logic
- b) Coding the program
- c) Flowcharting the program
- d) Defining the problem

7- After stating the solution to a problem in pseudo code the next step would be

- a) Testing the program c) Coding the program
- b) Documenting the program d) Translating the problem

8-Logic flowcharts are important tool for computer...

- a) Analysts c) Systems
- b) Planning d) Programmers.

The Answer:

Statement's No.	The Best Responses	
1	B	Defining the problem
2	A	Design the Program logic.
3	C	Pseudo code.
4	B	Testing
5	D	Documenting.
6	D	Defining the problem
7	C	Coding the program
8	D	Programmers

C: Indicate whether each of the following statements is true (T), or false (F), and justify the false ones. You may organize your answer as follows:

Statement's No.	T or F	Incorrect Term	Correct Term
-----------------	--------	----------------	--------------

- 1- A programming language is a set of rules that provides a way of telling the computer what operations to perform.
- 2- Structured programs are easier to read and debug.
- 3- Before a programmer writes a program the programmer must define the problem and design the program logic.
- 4 - Two means of planning a computer solution are Pseudo code and flowcharting.

The answer:

Statement's No.	T or F	Incorrect Term	Correct Term
1	T	—	—
2	T	—	—
3	T	—	—
4	T	—	—

D: Flow - Charts Problems:

1. Draw a program flow-chart to calculate the amount of interest for a bank saving account. The interest rate is 8% the old balance of each account, the computed interest, and the new balance is to be printed on a customer statement.
2. Draw a program flow-chart to calculate the amount of interest for a 500 bank saving account. The interest rate is 8% The old balance data are stored on a tape.
The bank management wants to count the number of saving accounts, and the total interest. The old balance, the computed interest and the new balance is to be printed on a customer statement.
3. Draw a program flow-chart to calculate the average sales for a 200 of salesmen. The sales record of each salesman is stored on a tape. The total and sales are to be printed.
4. Draw a program flow-chart to calculate salesmen commission. The management policy is to give 12% commission to any salesman if the amount his sales are over the sales quota (more than L.E. 5000). The sales commission for each salesman is to be printed on a report.
◀ **Use this formula:**
$$\text{Commission} = (\text{sales} - \text{quota}) \times r$$
5. Draw a program flow-chart to calculate salesmen commission. The management policy is to give

12% commission to any salesman if the amount of his sales is over the sales quota (more than L.E. 5000). The number of salesman who earned commission, the total commission payable, and the sales commission for each salesman is to be printed on a report:

◀ Use this formula:
 $\text{Commission} = (\text{sales} - \text{quota}) \times \text{rate}.$

6. Read a file of a record for 200 salesmen. Each record contains salesman name, basic salary, and sales amount.

*Compute commission and gross pay for each salesman. If the sales amount is \geq L.E. 10000, the commission rate is 5%, If the sales amount is $<$ L.E. 10000 the commission rate is zero.

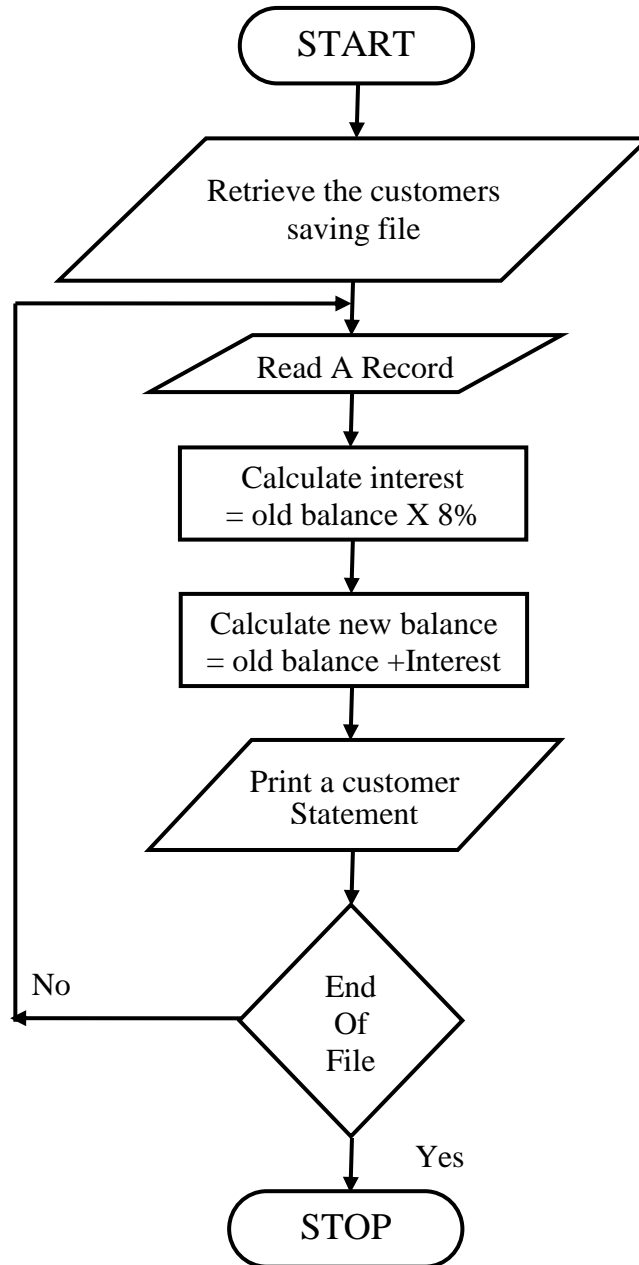
◀ Uses this formula:
 $\text{Commission} = (\text{sales} - \text{quota}) \times \text{rate}.$

* Produce a salesman payroll report which shows the following information for each salesman: name, basic salary, commission, and gross pay.

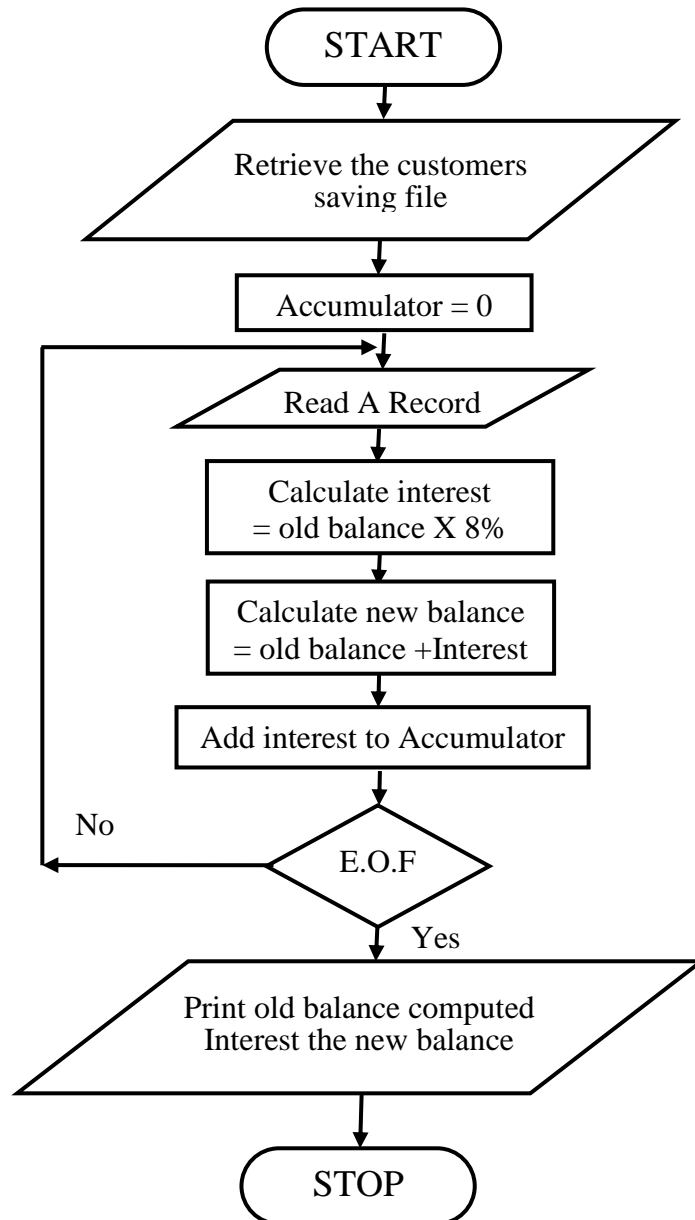
7. Draw a program flow-chart to calculate the net salary (S) for 300 employees, according to the following information:

B = Basic Salary	S = net Salary
A = Salary Additions	N = counter of employees
D = Deductions	= 10% when $B \leq 500$ L.E.
	= 15% when $B > 500$ L.E.

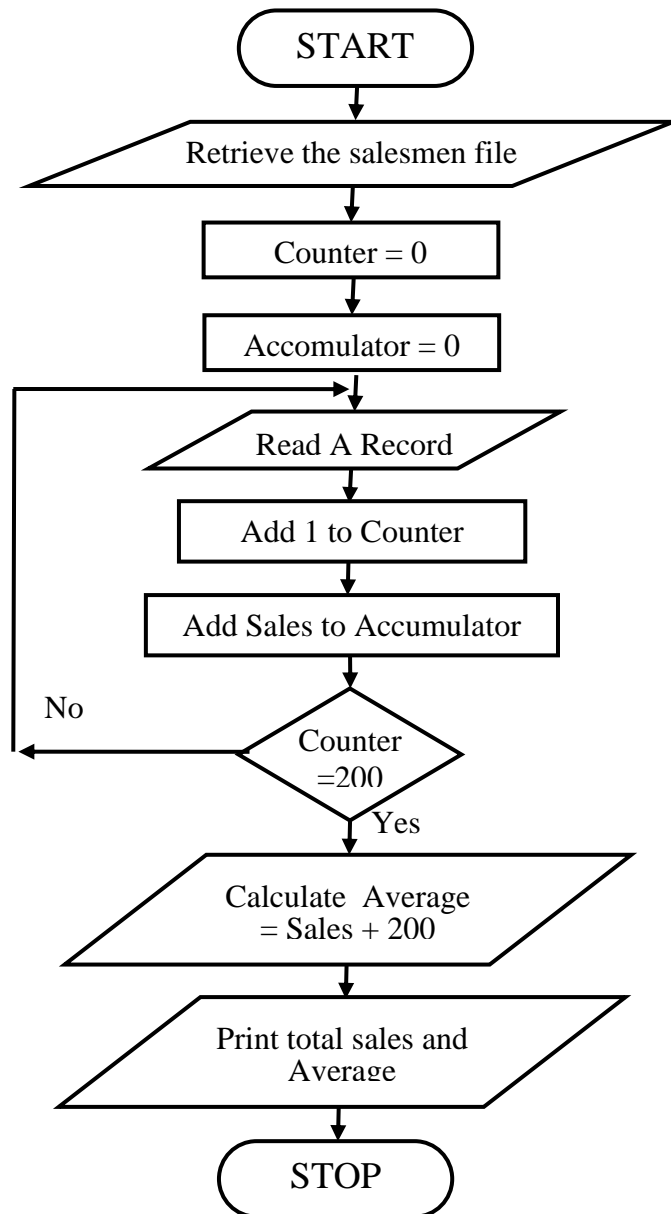
1)



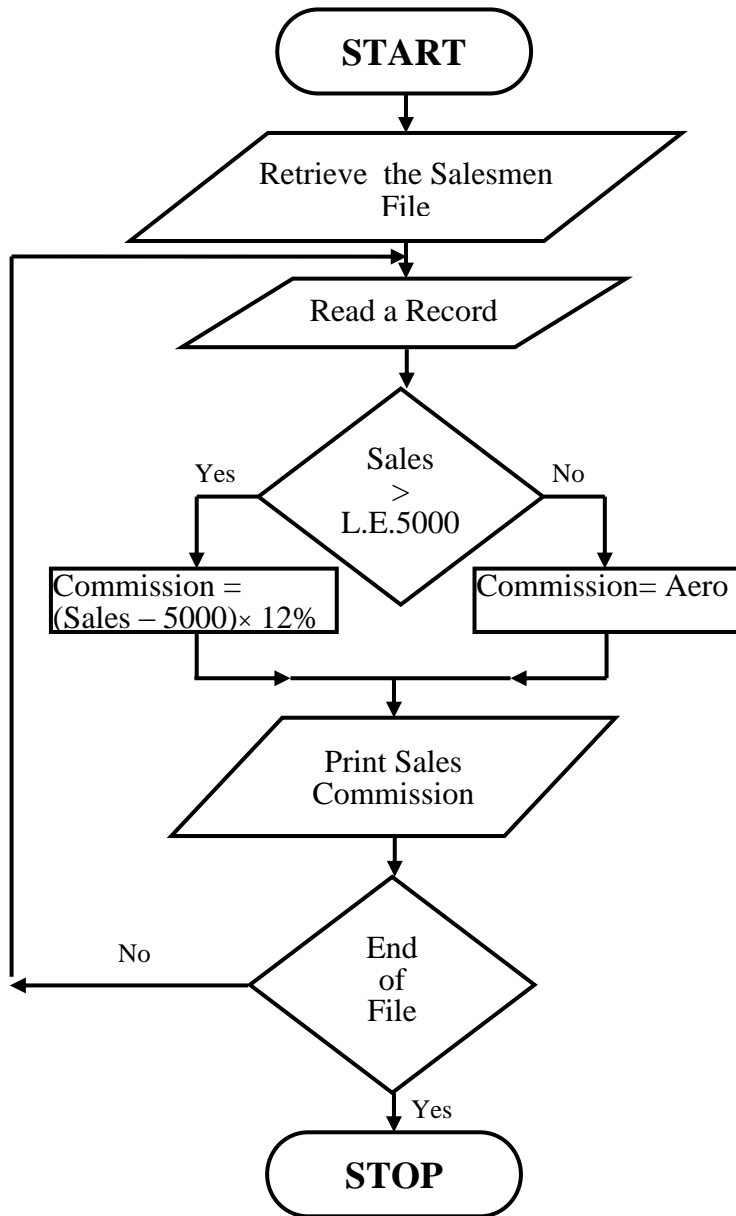
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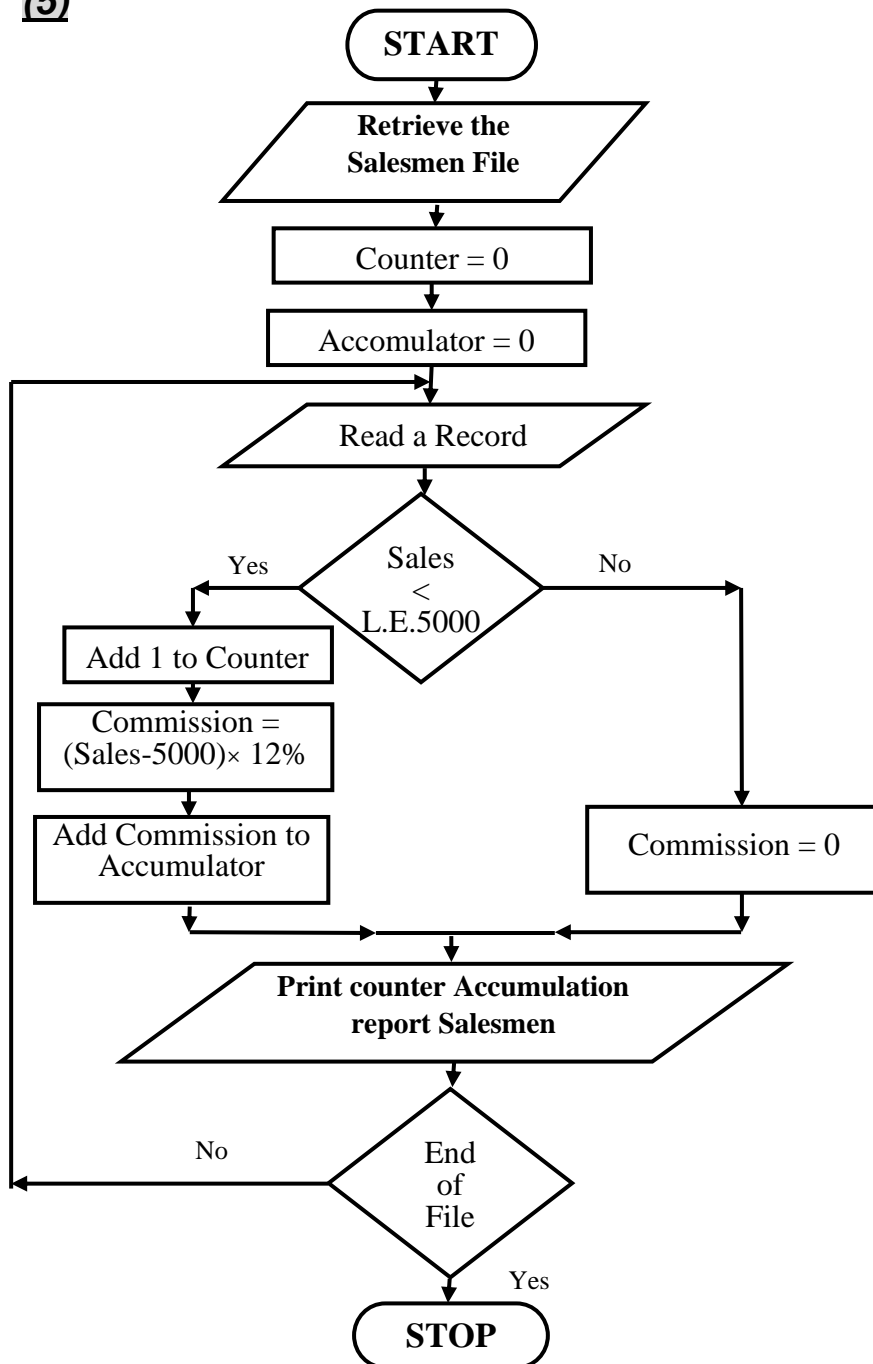
(3)



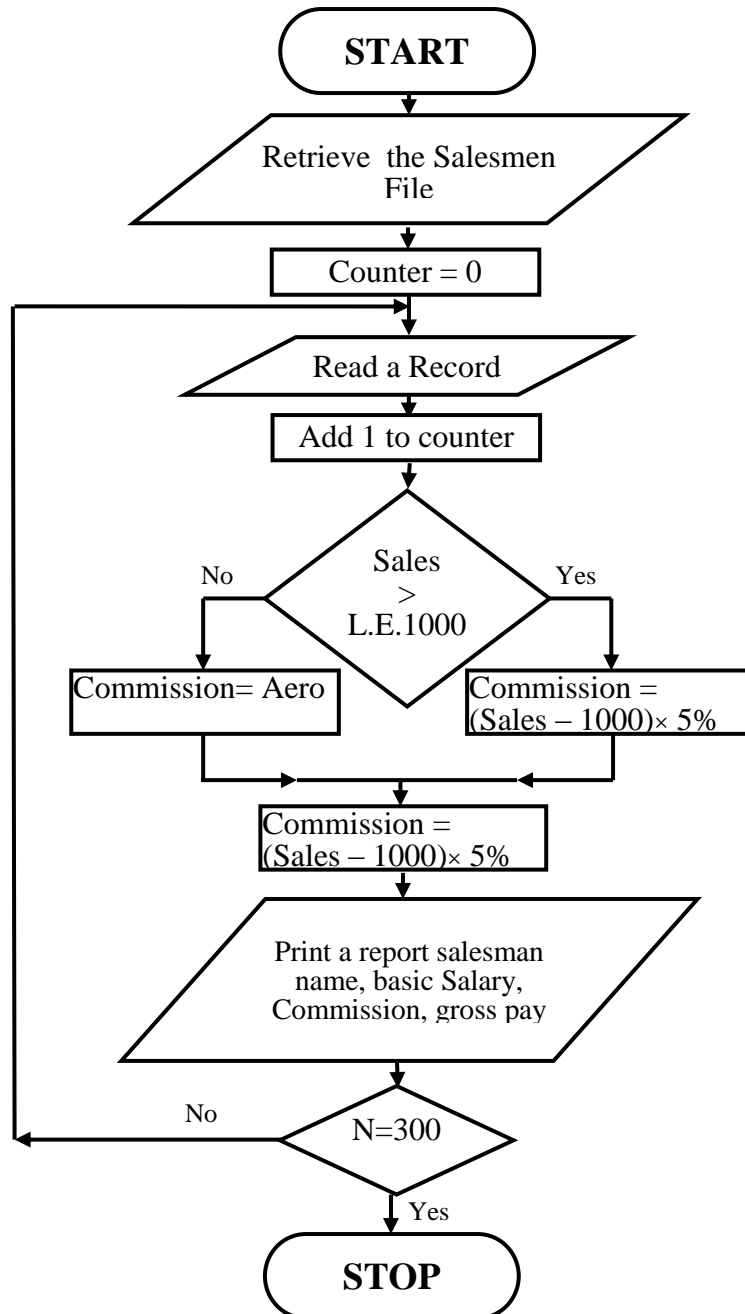
(4)



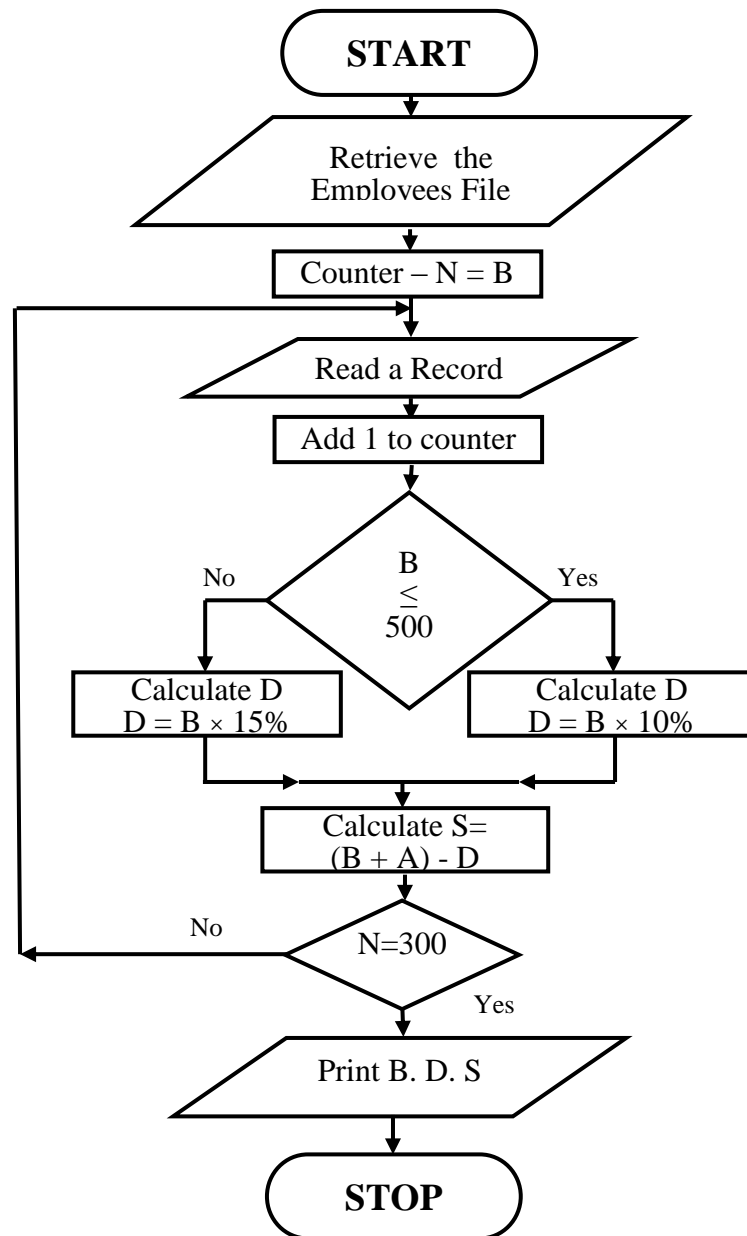
(5)



(6)



(7)



E: For each of the following statements, chose the best response:

1. In preparing a program, one should first
 - a. plan the solution
 - b. document the program
 - c. code the program
 - d. define the problem.
2. During the development of a program, drawing a flowchart is a means to.....
 - a. plan the solution
 - b. analyze the program
 - c. code the program
 - d. define the problem.
3. An English-like language that one can use as a program design tool is....
 - a. BASIC
 - b. COBOL
 - c. pseudo code
 - d. PASCAL
4. In preparing a program, desk-checking and translating are examples of...
 - a. coding
 - b. testing
 - c. planning
 - d. documenting
5. The process of detecting, locating, and correcting logic errors is called...
 - a. desk-checking
 - b. debugging
 - c. translating
 - d. documenting
6. Comments in the program itself are part of.....
 - a. compiling
 - b. linking
 - c. translating
 - d. documenting
7. The first high-level language to be introduced was.....

- a. natural language c. assembly language
- b. BASIC d. machine language

15. An assembly language uses

- a. English words c. mnemonic codes
- b. 0s and 1s d. binary digits

16. A programming language is a set of:.....

- A. commands and keywords with which the user speaks to a program.
- B. instructions telling the computer what to do.
- C. keywords and grammatical rules for writing computer programs.
- D. instructions that a CPU understands.

17. The term that refers to a step-by-step solution to a problem is :.....

- a. programming language. b. flowchart
- c. program d. algorithm

18. A pictorial representation of the steps involved in an algorithm is called a(n):.....

- a. algorithmic diagram. c. pseudo code diagram.
- b. flowchart d. language formatter

19. Which is the correct sequence of lowest to highest level programming language?.....

- A. COBOL → machine → assembly → query
- B. assembly → machine → COBOL → query
- C. machine → assembly → COBOL → query
- D. query → assembly → machine → COBOL

20. Machine language is :.....

- a. a 4GL. b. in binary.
- c. in hexadecimal. d. source code.

The Answer

1	D	8	D	15	C
2	A	9	C	16	C
3	C	10	D	17	D
4	B	11	B	18	B
5	B	12	B	19	C
6	D	13	B	20	B
7	C	14	D		

F: Indicate whether each of the following statements is true (T), or false (F),

- 1. Developing a program requires just two steps, coding and testing.**
- 2. A flowchart is an example of pseudo code.**
- 3. Desk-checking is the first phase of testing a program**
- 4. A translator is a form of hardware that translates a program into language the computer can understand.**
- 5. Debugging is the process of locating program logic errors.**
- 6. The highest level of language is natural language.**

7. Pseudo code can be used to plan and execute a program.
8. 4GLs increase clarity but reduce user productivity.
9. FORTRAN stands for FORMs TRANSfer.
10. An assembly program translates high-level language into assembly language.
11. Another name for a high-level language is 4GL.
12. A query language is a type of assembly language.
13. FORTRAN is used primarily in scientific environments.
14. Low-level languages are tied more closely to the computer than are high-level languages.

The Answer

1	F	6	T	11	F
2	F	7	F	12	F
3	F	8	F	13	T
4	F	9	F	14	T
5	T	10	F		

G: Complete the following statements

1. The type of language used to access databases is called a(n)language
2. The type of language that replaced machine language by using mnemonic codes is called a(n)language.
3. A query language is what level of language?.....
4. The name for a translator that translates high-level languages into machine language is.....
5. Languages that resemble spoken languages are called.....
6. The high-level language that is scientifically oriented is.....
7. The programming process step that is best done throughout the process is.....
8. Two common methods of planning the solution to a problem are.....
9. List the three phases of testing a program:.....
10. The next step after a programmer has planned the solution is to:..
11. A(n) is a step-by-step logical sequence for a problem's solution.

12. The acronym ANSI stands for.....
13. Most language translation is accomplished via special system programs called.....
14. is the process of writing narrative descriptions of the program logic, inserting comments in the source code, and drawing graphical illustrations of the algorithm using flowcharts.
15. The programming language FORTRAN stands for
16. The programming language COBOL stands for.....
17. The programming language BASIC stands for.....

The Answer

1	Query	10	Code The Program
2	Assembly Language	11	Algorithm
3	Very High Level Language	12	American National Standards Institute
4	Compiler	13	Compilers
5	Natural Languages	14	Documentation
6	FORTRAN	15	FORmula TRANslator
7	Documentation	16	Common Business-Oriented Language
8	Flowcharting, Writing Pseudo Code	17	Beginners' All-Purpose Symbolic Instruction Code
9	Desk-Checking, Translating, Debugging		

Chapter (10)
SPREADSHEETS
AND
BUSINESS GRAPHICS

A : Complete the following statements; you do not have to rewrite the whole statement in your answer book you may write the statement's number and missing word (s) : Use the Following Format :

Statement's No	The missing word
----------------	------------------

1. The actual number entered into a cell is the.....
2. What is the name of the kind of analysis that lets a user change spreadsheet values and then observe the resulting effect?.....
3. What are enhanced graphics called?.....
4. In a spreadsheet a formula or function is called the cell content; what is the calculated result called?
5. What is the intersection of a row and column on a spreadsheet called?
6. Plain line graphs are an example of what kind of graphics?.....
7. Another name for a cell address is the.....
8. Another name for the active cell is the.....
9. In a line graph the horizontal axis is called the.....
10. A preprogrammed formula is called a.....
11. A group of cells in a rectangular form is called a...

12. When one value or calculation on a spreadsheet is changed, all dependent calculations are also changed by the software. This is called.....
13. The letter and number of the intersecting column and row of a cell is called.....
14. Another name for an electronic spreadsheet is.....
15. The type of cell that contains descriptive information is called a.....
16. In a line graph the vertical axis is called the.....
17. How many values can a pie chart represent for each value?.....
18. The type of graph used to show a trend over time is called a.....
19. is the act of changing one or more spreadsheet values and observing the resulting calculated effect.
20. is an instruction to the spreadsheet to perform a calculation, and it consists of values, cell references, and mathematical operations.
21. The feature of spreadsheets that make “what-if” analysis so immediate and quick is.....
22. A worksheet has thousands of numbered horizontal containing cells.

23. The vertical of a worksheet are identified by letter.
24. A(n) of a spreadsheet is at the intersection between a row and a column.
25. An alphanumeric combination such as A25 or C11 is a(n)
26. Thecell, usually marked with pronounced borders, is the one that will receive the text or value typed by the user.
27. A(n) contains a combination of values, cell references, and arithmetic operators.
28. A group of adjacent cells within a rectangular region is called a(n)
29. Another term for business-quality graphics is
30. The type of graph that displays a circle segmented into wedges is a(n)
31. Another name for worksheet is.....
32. The process of changing one or more values in a spreadsheet for the purpose of observing the differences in the calculated results is called.....
33. The reference to a cell by its unique column and row is its.....
34. The part of the individual cell reference that is alphabetic is the..

35. A type of cell content that is an instruction to the program to perform a calculation is called a
36. The actual data entered into a numeric cell to be used for calculations is the.....
37. A preprogrammed formula is a
38. Cell content that provides descriptive text information, such as a name is called a.....
39. If a cell contains a formula then, relative to the cell, the formula is called the.....
40. A group of highlighted cells in a rectangular shape is called a.....
41. If a user makes a mistake in a cell value, and that same cell is used as part of a formula in another cell, the formula calculation will reflect the new value. This process is called.....
42. The type of graphics that includes enhanced charts and a clip art library is called
43. The kind of graph that shades a rectangular area for each value of each variable is a.....
44. The intersection of a row and a column is called a....
45. Another name for business quality graphics is

The Answer

Statement's No.	The Missing Word(S)
1	value
2	"what-if" analysis
3	presentation graphics
4	displayed value
5	cell
6	analytical
7	cell reference
8	current cell
9	x-axis
10	function
11	range
12	automatic recalculation
13	cell address
14	worksheet
15	label
16	y-axis
17	one
18	line graph
19	“What-if” analysis
20	formula
21	automatic recalculation
22	rows

23	columns
24	cell
25	cell address
26	active
27	formula
28	range
29	presentation graphics
30	pie chart
31	spreadsheet
32	“what if” analysis
33	cell address
34	column
35	formula
36	value
37	function
38	label
39	content
40	range
41	automatic recalculation
42	presentation graphics
43	bar graph
44	cell
45	presentation graphics

B: For each of the following statements, chose the best response. You do not have rewrite the whole statement in your answer book, you may write the statement's number and the best response.

- 1. The active cell is the**

a. current cell	b. range
c. formula	d. cell address
- 2. A preprogrammed formula is called a.....**

a. function	b. graph
c. range	d. cell
- 3. A chart that represents only one value for each variable is known as a**

a. function	b. line graph
c. pie chart	d. bar graph
- 4. Business-quality graphics is another name for.....**

a. a recalculation	c. analytical graphics
b. a range graphics	d. presentation
- 5. The intersection of a row and column creates a(n)....**

a. active address	b. formula
c. cursor	d. cell
- 6. Text information in a cell is called a.....**

a. label	b. value
c. formula	d. cell address
- 7. A cell entry that provides descriptive information is called a...**

- a. value
c. label
- b. data point
d. title
8. Automatic recalculation refers to the changes to values dependent on.....
a .what if
c. a function
- b. the axis
d. a changed value
9. SUM is an example of a.....
a. displayed value
c. label
- b. range
d. function
10. F2:G6 is an example of a
a. function
c. value
- b. range
d. cell address
11. Which of these is a correct cell address?
a. DD b. B6 c. 2C d. F0
12. When you change a value in a spreadsheet, dependent values of the spreadsheet are:
a. highlighted to show the changes.
b. automatically recalculated.
c. shown in formula form.
d. hidden from view.
13. Another name for an electronic spreadsheet is:
a. workbook. b. document
c. database. d. worksheet
14. The horizontal dimension of a spreadsheet is called a:
a. dimension. b. cell c. row. d. column

8. Automatic recalculation refers to the changes to values dependent on.....

9. SUM is an example of a.....

10. F2:G6 is an example of a

11. Which of these is a correct cell address?

12. When you change a value in a spreadsheet, dependent values of the spreadsheet are:

13. Another name for an electronic spreadsheet is:

14. The horizontal dimension of a spreadsheet is called

15. The vertical dimension of a spreadsheet is called a:
a. field. b. record c. row. d. column
16. The intersection between a row and a column is called a(n):
a. intersection. b. cell
c. field. d. address
17. In a spreadsheet, columns are labeled:.....
a .by letters in alphabetical order.
b. numerically in ascending sequence.
c .by cell references.
d. with the letter “C” for “column” followed by a number.
18. In electronic spreadsheets, alphanumeric combinations such as A5, B9, D15 are:....
a. row identifiers. c. formulas.
b. cell addresses d. functions.
19. The active cell is the one that:.....
a. contains a formula or function.
b. automatically recalculates when data changes in other cells.
c. is referenced by other cells in the spreadsheet.
d. will receive the input that is typed by the user.
20. A spreadsheet cell that is highlighted with a heavy border is:
a. the active cell.
b. a cell containing a formula.
c. a locked cell.
d. the most recently calculated cell.

21. An arithmetic formula can contain all of the following except:...
- a. a label.
 - b. a cell reference
 - c. a symbol such as +, -, *, or /.
 - d. a numeric value.
22. Which of the following is a correct cell address?...
- a. AA
 - b. 25
 - c. 3B
 - d. C5
23. Which of the following is a correct row address?...
- a. AA
 - b. 25
 - c. 3B
 - d. C5
24. Which of the following is a correct column address?...
- a. AA
 - b. 25
 - c. 3B
 - d. C5
25. In a spreadsheet, rows are labeled:.....
- a. by letters in alphabetical order.
 - b. numerically in ascending sequence.
 - c. by cell references.
 - d. with the letter “R” for “row” followed by a number.
26. The symbols B2:E3 refers to.....:
- a. a range.
 - b. a mathematical formula.
 - c. the display value of a function.
 - d. a cell address
27. Which cell address will be included in the range C5:E7?.
- a. C8
 - b. D6
 - c. E4
 - d. D9
28. The type of chart that is most appropriate for showing multiple comparisons in a striking and colorful way is a:..

- a. line graph. c. pie chart
b. bar graph. d. clip-art graph
29. The type of chart that is most appropriate for showing how a whole is subdivided into parts is a:.....
a. line graph. c. pie chart
b. bar graph. d. clip-art graph
30. Which is not one of the three types of information that can be in a cell?.....
a. label b. range c. value d. formula
31. Another name for a worksheet is.....
a. graph. b. cell.
c. spreadsheet d. function.
32. The combination of unique column and row is a
a. label. b. function. c. value. d. cell address
33. A specified group of cells in a rectangular shape is called a.....
a. rectangle. b. label c. range d. function
34. =SUM(B3:B10) is an example of a.....
a. function. b. label. c. border. d. cell address
35. If a user wants to use a range of cells that includes rows 3, 4, and 5 for columns B, C, and D, the range is specified:
a. C4:D5. b. B1:D5. c. B3:C5. d. B3:D5.

36. The active cell is also called the
a. current cell. b. label cell
c. range cell d. function cell.
37. Text information in a cell is categorized as a.....
a. label. b. formula
c. value d. displayed value
38. The term that describes the changed calculated result of a formula if a value of one of the cells in the formula has changed is
a. analysis c. electronic business.
b. automatic recalculation d. functioning.
39. A preprogrammed formula is called a.....
a. value. b. procedure c. function d. label.
40. If a cell contained =SUM(A6:F6), this is an example of a(n).....
a. label b. cell address. c. function d. axis.

The Answer

1.	A	15.	D	29.	C
2.	A	16.	B	30.	B
3.	C	17.	A	31.	C
4.	D	18.	B	32.	D
5.	D	19.	D	33.	C
6.	A	20.	A	34.	A
7.	C	21.	A	35.	D
8.	D	22.	D	36.	A
9.	D	23.	B	37.	A
10.	B	24.	A	38.	B
11.	B	25.	B	39.	C
12.	B	26.	A	40.	C
13.	D	27.	B		
14.	C	28.	B		

C: Indicate whether each of the following statements is true (T), or false (F):

- 1. Another name for the content of a cell is the displayed value.**
- 2. A group of cells in a rectangular form is called a range.**
- 3. Another name for the active cell is the cell reference.**
- 4. A manual spreadsheet is capable of automatically recalculating totals when changes are made to figures in the spreadsheet.**
- 5. The displayed value of a cell is called its formula or function.**
- 6. A function is like a preprogrammed formula.**
- 7. Another name for the current cell is a labeled cell.**
- 8. In a spreadsheet, both column width and row height can be altered.**
- 9. Analytical graphics let you construct line, bar, and pie chart graphs.**
- 10. Many presentation graphics programs can edit and enhance charts created by other programs.**
- 11. Presentation graphics appear professionally produced.**

- 12. In a spreadsheet a label cannot be used for calculations.**
- 13. “What if” analysis is the process of changing only the formulas in a spreadsheet in order to observe the changed calculated results.**
- 14. A cell address is formed by taking the combination of the number of the column and the letter of the row.**
- 15. Analytical graphics are an enhanced version of presentation graphics.**
- 16. A user may specify a range of cells by highlighting a group that comprise a rectangular shape.**
- 17. In a spreadsheet cell involving a formula, the content of the cell is the formula itself.**
- 18. A formula may contain one or more functions.**
- 19. In an electronic spreadsheet, the value of any cell containing a formula will change if any value in a cell used in the formula changes.**
- 20. SUM and AVG are examples of formulas.**

The Answer

1.	F	8.	T	15.	F
2.	T	9.	T	16.	T
3.	F	10.	T	17.	T
4.	F	11.	T	18.	T
5.	F	12.	T	19.	T
6.	T	13.	F	20.	F
7.	F	14.	F		

REFERENCES

- Anderson, Ron, Computer studies, First Edition, Blackwell Scientific Publications, London, 1990 .
- Blewett, Frank and Jarvis, Robin, Microcomputers in Accounting ,Van No strand Reinhold (International) The Institute of Chartered Accountants in England and Wales
- Bonder, George H. And Hopwood, William S., Accounting Information Systems , Fourth Edition, Allyn and Bacon, London ١٩٩٠ ,
- Capron, H.L., Computers tools for an Information Age, Second Edition, The Benjamin / Cummings Publishing Company, Inc ,.New York, 1990 .
- Goldstein, Larry Joel, Microcomputer Applications, Addison - Wesley Publishing Company, England, 1987 .
- Hutchinson, Sarah E, and Sawyer, Stacey C., Computers: The user perspective, Second Edition, Richard D. Irwin, Inc., Homewood ,Illinois 1990 .
- Long, Larry, Introduction to Computers and Information Processing. Prentice - Hall International, Inc., London, 1991 .
- O'Brien, James A., Computers in Business Management: An Introduction, Richard D.Irwin, Inc., Homewood, Illinois, 1975 .
- Tawfik, Sania and Ramzy, Wafaa, Introduction to Computers ,Cairo University , 1992 .
- Abdel - Khalek, Ahmed F. , Accounting Information
- Computers in Accounting based Systems, Dar El - Thakapha El- Arabia, Cairo – Egypt ١٩٩٧

- **Krumm, Rob, Learning Lotus 1-2-3 for Business, Addison - Wesley Publishing Co., N.Y. , 1988 .**
- **Goldstein, L.J., Microcomputer Applications, Addison -Wesley Publishing Co., N.Y. ,1987**
- **Capron, H.L., Computers : Tools For an Information Age, Fourth edition, California : The Benjamin/Cummings Publishing Company, Inc., 1996 .**
- **Long, Larry, Introduction to Computers and Information processing, Third Edition, Englewood Cliffs, N.J., Prentice Hall, 1991 .**
- **Mandau, Steven, Computers and Data Processing : Concepts and Applications With Basic, Third Edition, St. Paul : West Publishing Company, 1985 .**
- **Shelly, G., and T. Cashman, Computer Fundamentals For an Information Age, Brea, California, Andheim Publishing Company, Inc, 1984.**
- **IBM. Introduction to DOS, and P.C.**